

# **MULTI-COUNTY GOODS MOVEMENT ACTION PLAN VOLUME 1, APPENDIX A: FINANCIAL FRAMEWORK**

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**Table of Contents**

<b>1.0</b>	<b>FINANCIAL FRAMEWORK.....</b>	<b>A-1</b>
<b>2.0</b>	<b>FEDERAL FUNDING SOURCES .....</b>	<b>A-10</b>
2.1	FEDERAL DISCRETIONARY PROGRAMS .....	A-11
2.2	FEDERAL FORMULA PROGRAMS .....	A-17
2.3	FEDERAL FORMULA PROGRAMS .....	A-20
2.4	FREIGHT PROGRAMS IN SAFETEA-LU .....	A-26
2.5	DEPARTMENT OF DEFENSE .....	A-27
<b>3.0</b>	<b>STATE FUNDING SOURCES .....</b>	<b>A-28</b>
<b>4.0</b>	<b>LOCAL FUNDING SOURCES.....</b>	<b>A-34</b>
<b>5.0</b>	<b>USER FEES.....</b>	<b>A-37</b>
<b>6.0</b>	<b>INNOVATIVE FINANCE .....</b>	<b>A-42</b>
6.1	INNOVATIVE FINANCING MECHANISMS.....	A-43
6.2	INNOVATION AND MANAGEMENT OF FEDERAL FUNDS .....	A-46
6.3	INNOVATIVE PROJECT DELIVERY AND MANAGEMENT SYSTEMS/PUBLIC PRIVATE PARTNERSHIPS.....	A-49
<b>7.0</b>	<b>CONCLUSION.....</b>	<b>A-55</b>

**List of Figures**

Figure 1: Funding Sources for Completion of the Alameda Corridor East (ACE) Trade Plan.....	A-2
Figure 2: Funding Sources By County for the ACE Trade Plan .....	A-3
Figure 3: Percent of Funding By County for the ACE Trade Plan.....	A-3
Figure 4: Funding Sources for the ACECA Portion of the ACE Trade Corridor Plan .....	A-4
Figure 5: Funding Sources for the San Bernardino Portion of the ACE Trade Corridor Plan.....	A-4
Figure 6: Funding Sources for the Riverside County Portion of the ACE Trade Corridor Plan .....	A-5
Figure 7: Funding Sources for the Orange County Portion of the ACE Trade Corridor Plan .....	A-5
Figure 8: Unfunded Portion of the ACE Trade Corridor Plan, By County.....	A-6
Figure 9: Funding Sources for the Gerald Desmond Bridge .....	A-6
Figure 10: Funding Sources for the SR-47 Expressway .....	A-7
Figure 11: Funding Sources for the Navy Way / Seaside Avenue Project.....	A-7
Figure 12: Funding Sources for the 1-110 Connectors .....	A-8
Figure 13: Funding Sources for the Ports Rail Systems .....	A-8
Figure 14: Funding Sources for I-10 from I-15 to Ford Street .....	A-9
Figure 15: Funding Sources for Goods Movement Interchange Program.....	A-9

**List of Tables**

Table 1: Revenues Pledged for Repayment of TIFIA Financing .....A-22

Table 2: Summary of RRIF Program Agreements .....A-25

Table 3: Order of Magnitude Truck Toll Revenue Bond Levels .....A-39

Table 4: Potential Bonding Capacity From Container Fees .....A-41

Table 5: Requirements for Flexible Match Contributions .....A-48

Table 6: Innovative Contracting Roles and Responsibilities .....A-50

Note: The following financial framework was developed using the comprehensive list of projects and strategies contained in Appendix B, prior to the project partners' refinement of the regional and county-level list of projects included in the Executive Summary.

### 1.0 FINANCIAL FRAMEWORK

As shown in the comprehensive list of Goods Movement Projects within the MCGMAP Study Area, the results of this study have identified 249 projects for the region to improve goods movements. These projects fall into the following three project cost/funding categories:

1. Projects identified without cost estimates: 102 projects;
2. Projects identified with cost estimates with cost estimates and a preliminary funding plan: 50 projects; and
3. Projects identified with cost estimates but without a preliminary funding plan: 97 projects.

The total cost estimate for the 147 projects with cost estimates is almost \$40 billion, while the 50 projects with preliminary funding plans have identified \$2.5 billion for these projects. The resulting shortfall for projects with cost estimates is approximately \$37.5 billion.

The following figures provide a range of funding sources identified for a sample of projects.

- Figures 1 through 8 provide a detailed breakdown of the Alameda Corridor East Trade Plan, which has a funding shortfall of \$3.8 billion dollars. To date the largest funding sources identified are the State (\$282.3), the four counties (\$245 million combined) and a SAFETEA-LU earmark (\$172.3 million). However, only \$82.6 million of the SAFETEA-LU earmarks are currently considered fully funded.
- Figures 9 through 13 provide summaries of five infrastructure projects in the ports area. These five projects total \$2.16 billion of which 22 percent is committed from Federal sources and 19 percent is committed from State sources. However, the State General Obligation funds (25 percent of the total) represents the level of funding the ports would like to receive from Proposition 1B (\$2 Billion Trade Corridor Infrastructure Fund). Please note that in the *Good Movement Action Plan*, the Business, Transportation and Housing Agency only recommended this source for two of the projects (Gerald Desmond Bridge and SR-47 Express) at lower funding levels. Finally, the ports have proposed that private industry should share in funding these projects which would be through a fee on loaded containers collected from Beneficial Cargo Owners (importers and exporters). The five individual projects reflect the following
  - Figure 9 summarizes the funding plan for the Gerald Desmond Bridge, which has identified funding sources for the entire \$800 million project. The majority of project funding will be provided from Federal sources (40 percent - committed), private industry (28 percent) and State General Obligation (GO) Bonds (25 percent)
  - Figure 10 shows the funding plan for the SR-47 Expressway. Funding for the \$557 million project has been identified with the largest shares provided by the Ports (52 percent), State GO Bonds (22 percent) and private industry (22 percent)
  - Figure 11 provides the Navy Way/Seaside Avenue project. Funding for the \$40 million project has been identified with the largest shares provided by private industry (44 percent), State GO Bonds (39 percent) and the Ports (17 percent).

- Figure 12 summarizes the I-110 Connectors. Funding for the \$134 million project has been identified with the largest shares provided by State GO Bonds (38 percent), private industry (38 percent), and 28 percent from the Ports.
- Figure 13 summarizes the \$631 million Ports Rail Systems. Industry has been identified as primary funding source (61 percent) with the remainder to be funded by State GO Bonds (39 percent).
- Figures 14 and 15 represent funding plans within San Bernardino County for improvements to I-10 and the county's goods movement interchange improvement program.
  - Figure 14 shows the only identified funding source to add auxiliary lanes on I-10 from I-15 to Ford Street is Measure I funds (68 percent of total costs).
  - Figure 15 provides the funding sources for San Bernardino's Goods Movement Interchange Program. In total there are 27 interchange projects identified totaling \$971 million. Identified funding sources include Measure I funds (52 percent) and Developer Fees (39 percent).

**Figure 1: Funding Sources for Completion of the Alameda Corridor East (ACE) Trade Plan**

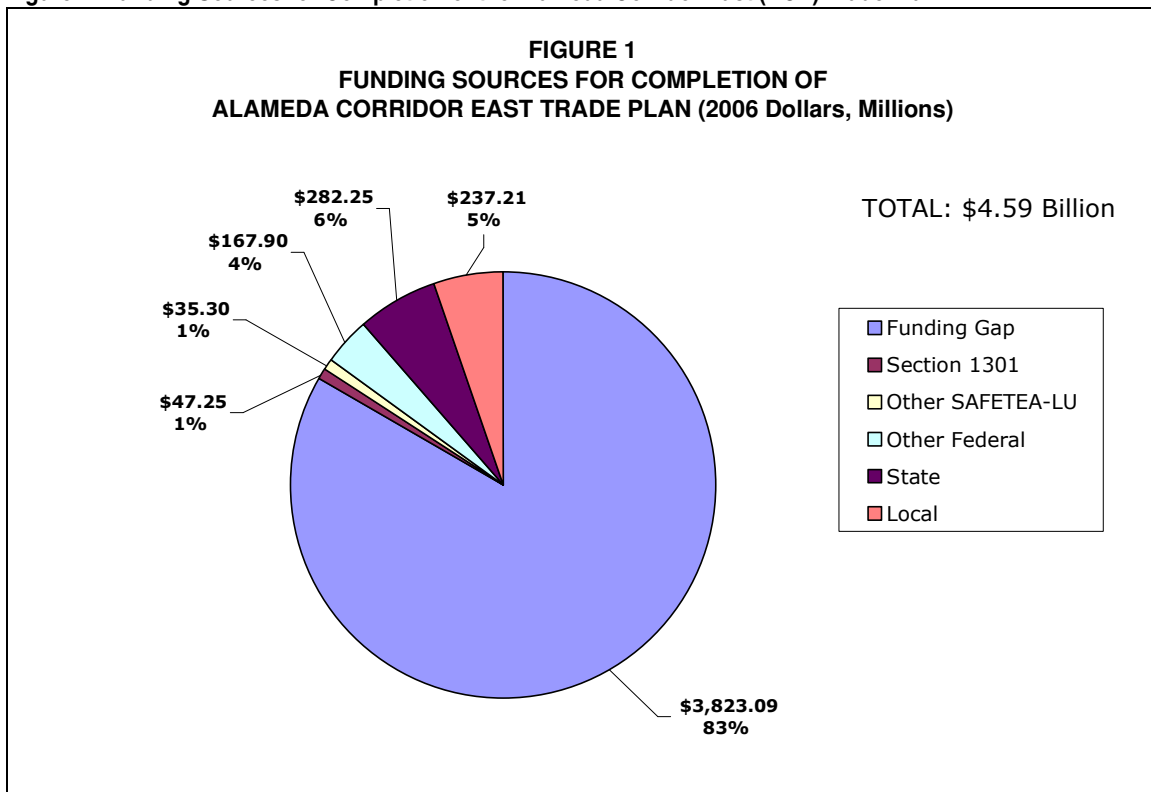


Figure 2: Funding Sources By County for the ACE Trade Plan

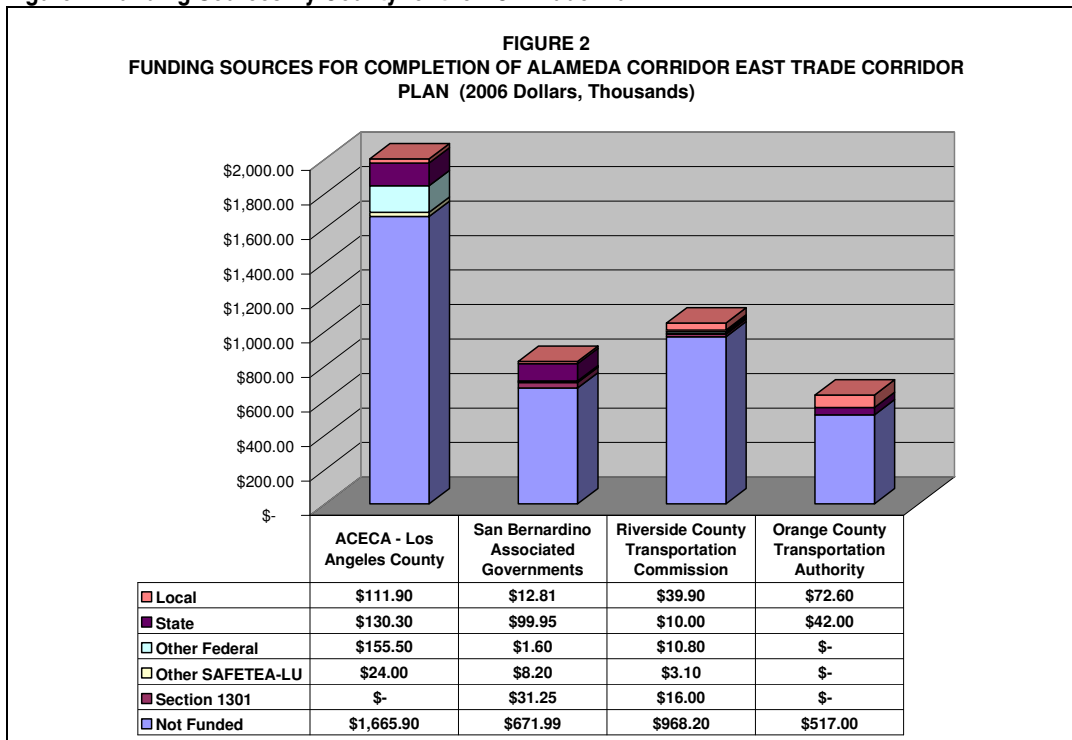


Figure 3: Percent of Funding By County for the ACE Trade Plan

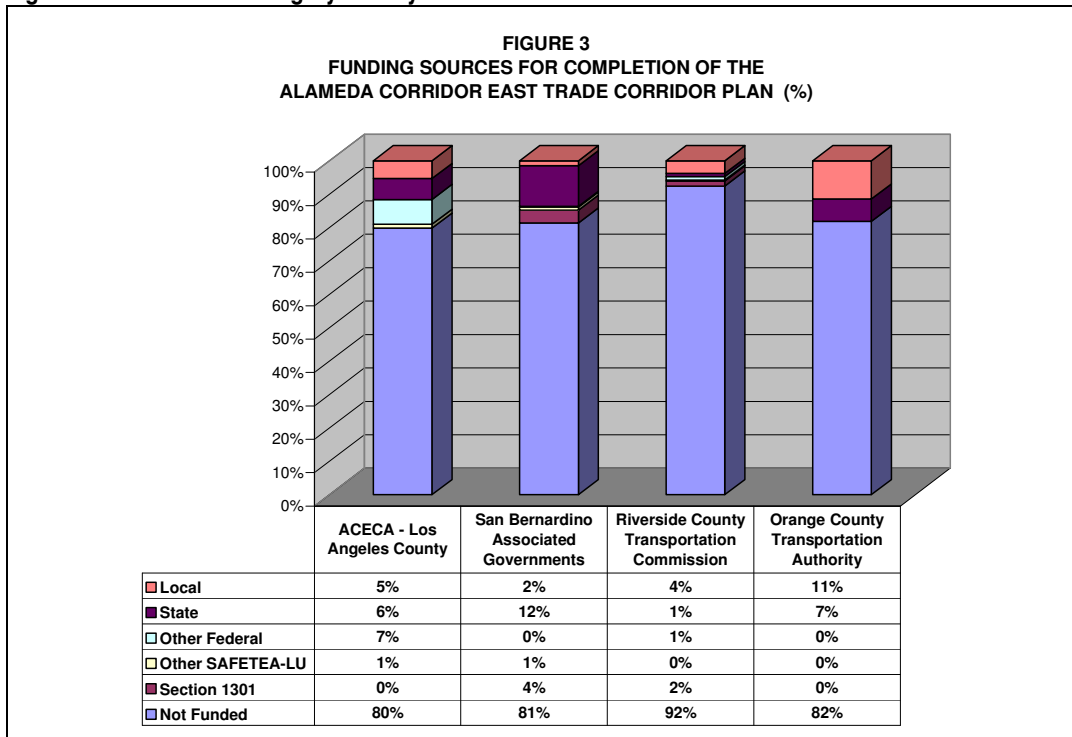


Figure 4: Funding Sources for the ACECA Portion of the ACE Trade Corridor Plan

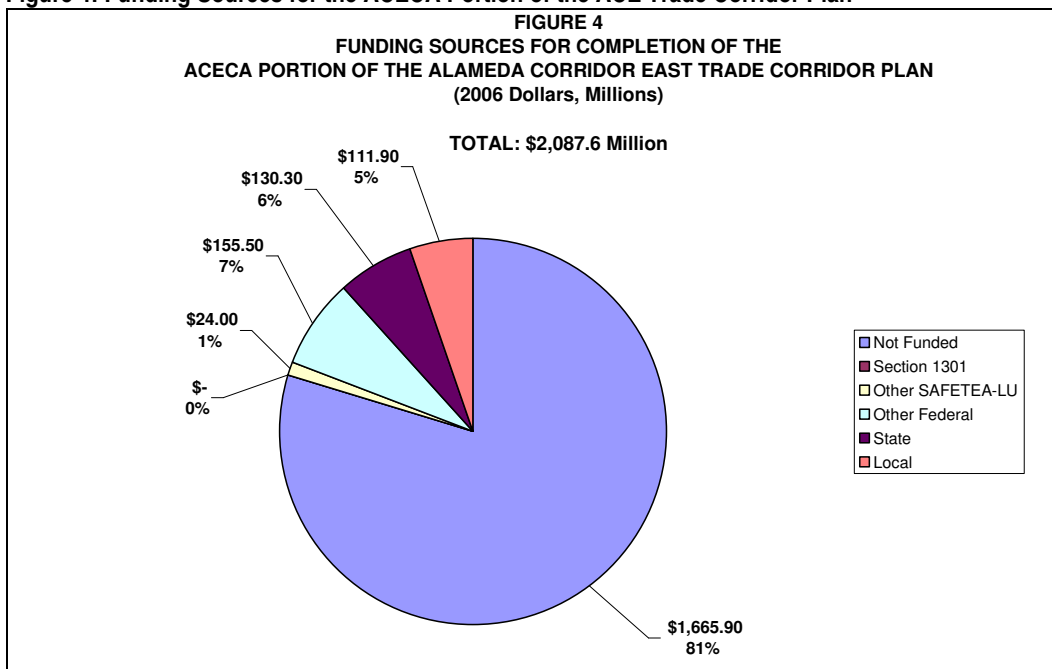


Figure 5: Funding Sources for the San Bernardino Portion of the ACE Trade Corridor Plan

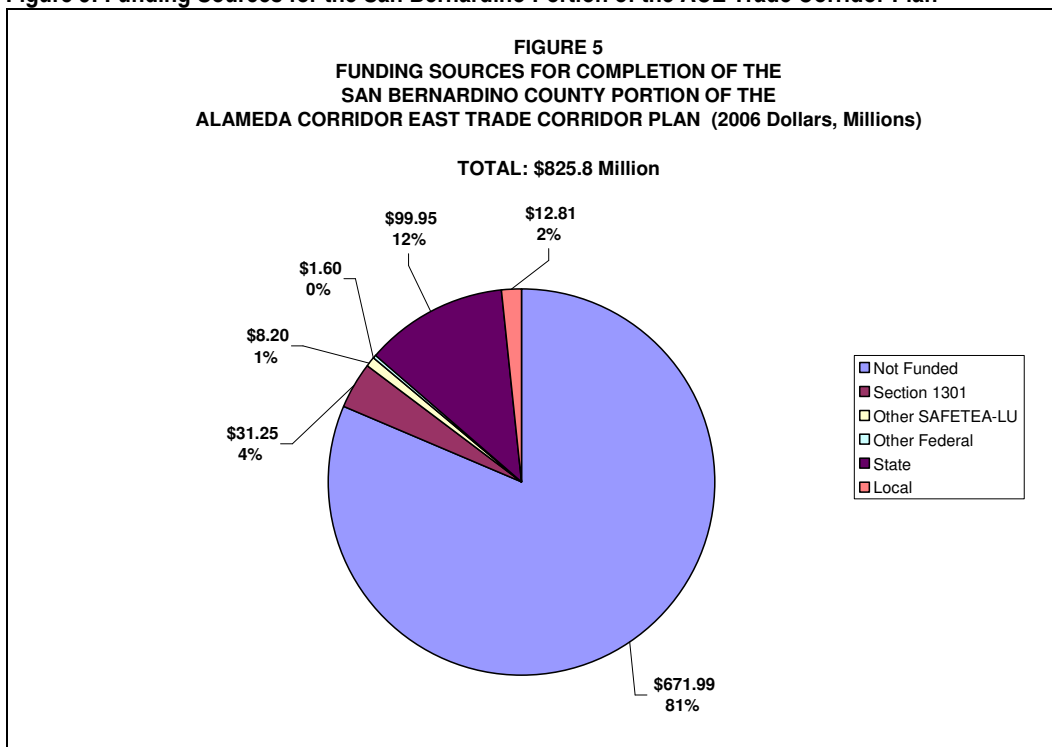


Figure 6: Funding Sources for the Riverside County Portion of the ACE Trade Corridor Plan

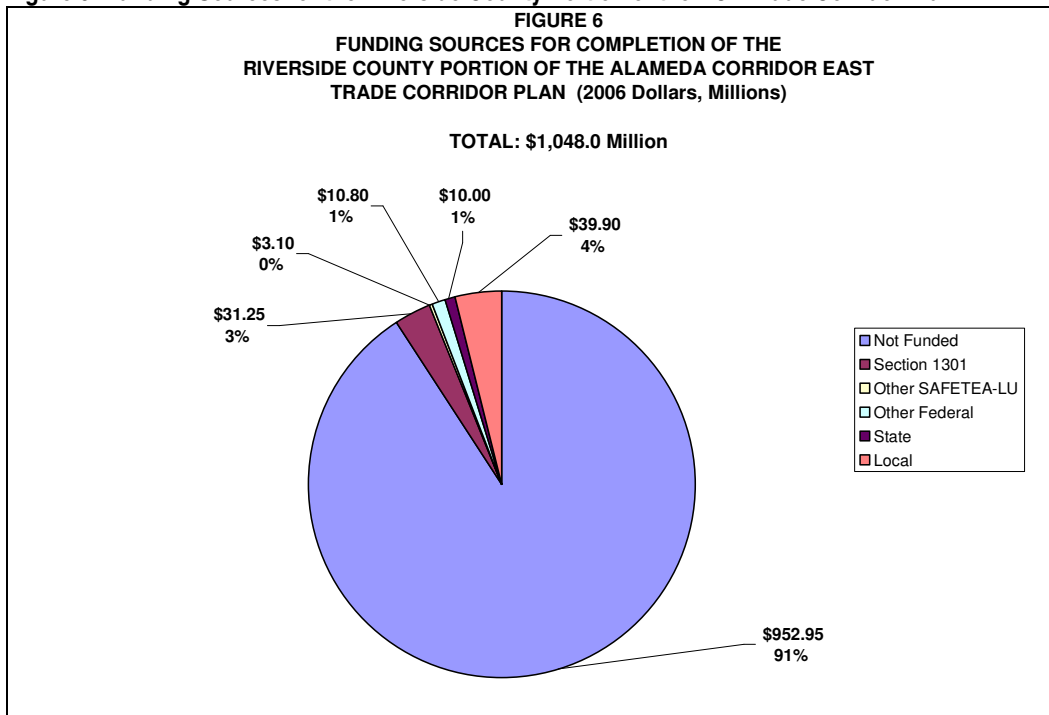


Figure 7: Funding Sources for the Orange County Portion of the ACE Trade Corridor Plan

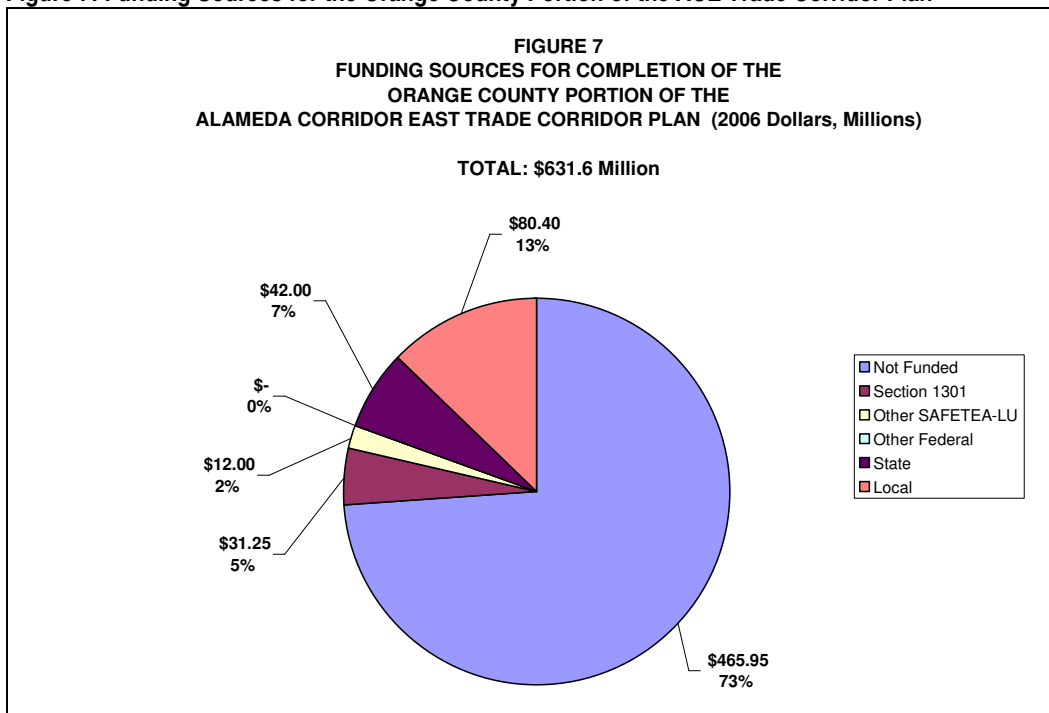




Figure 8: Unfunded Portion of the ACE Trade Corridor Plan, By County

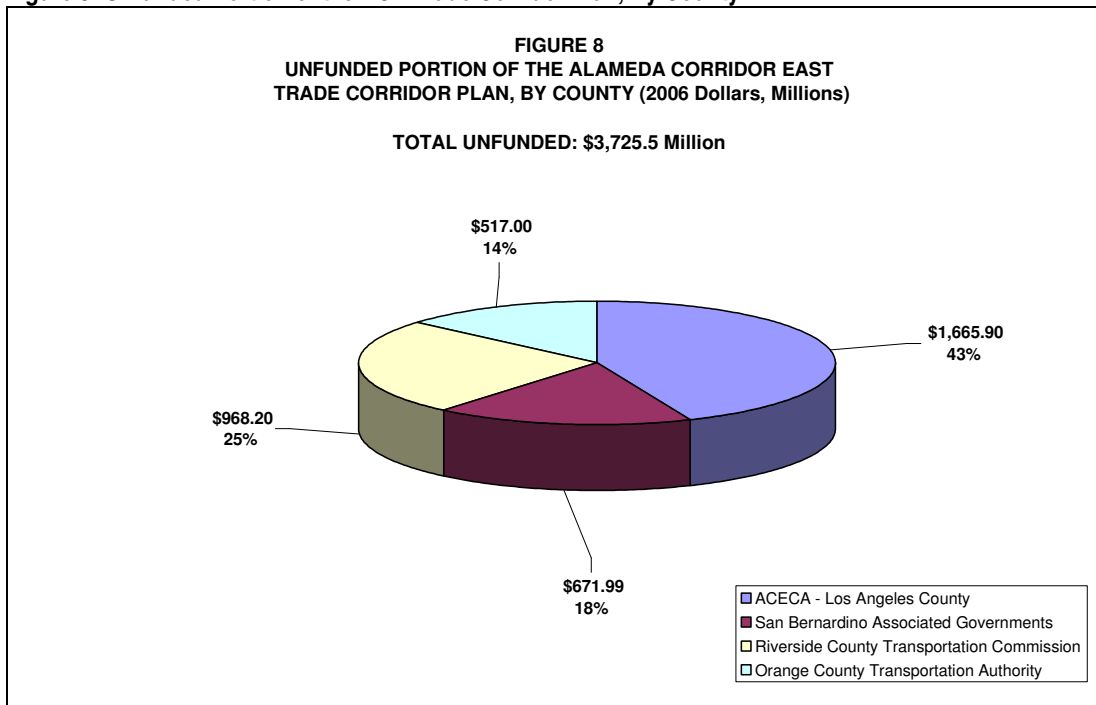


Figure 9: Funding Sources for the Gerald Desmond Bridge

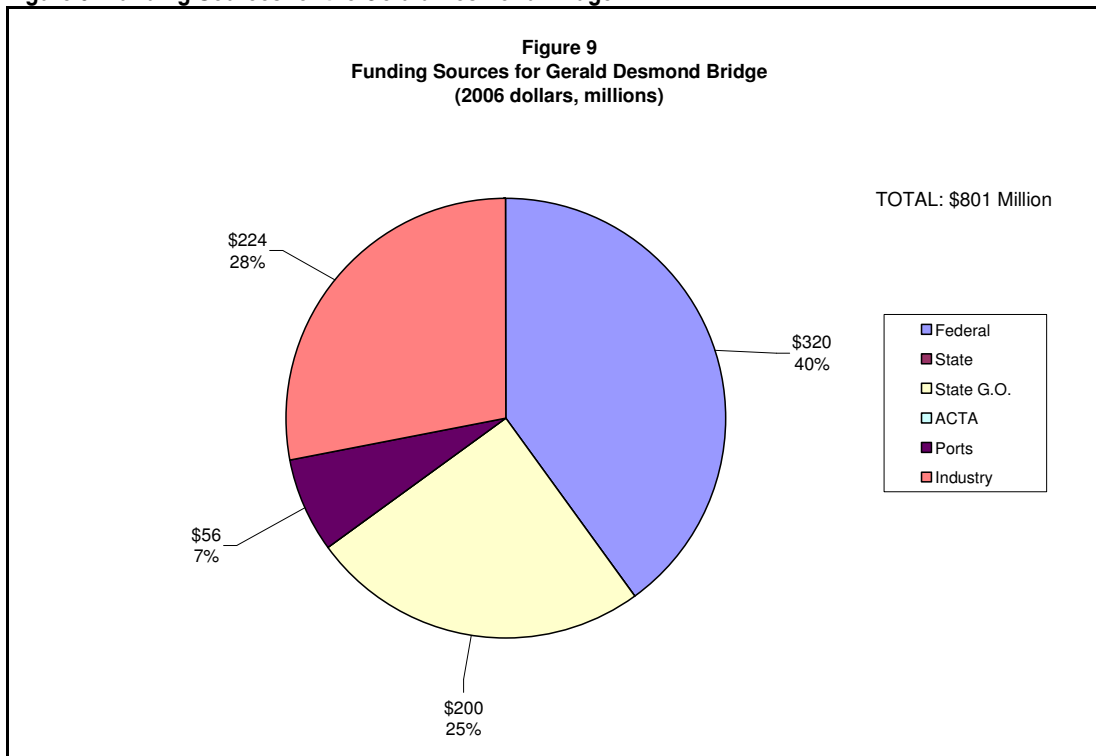


Figure 10: Funding Sources for the SR-47 Expressway

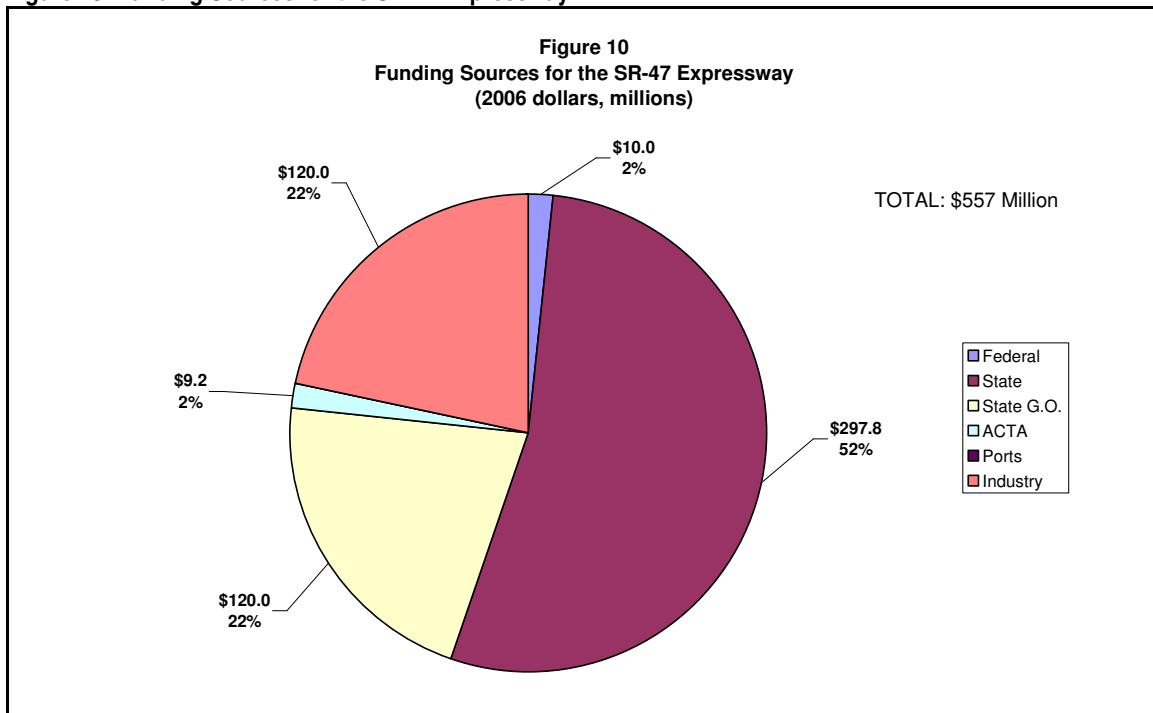


Figure 11: Funding Sources for the Navy Way / Seaside Avenue Project

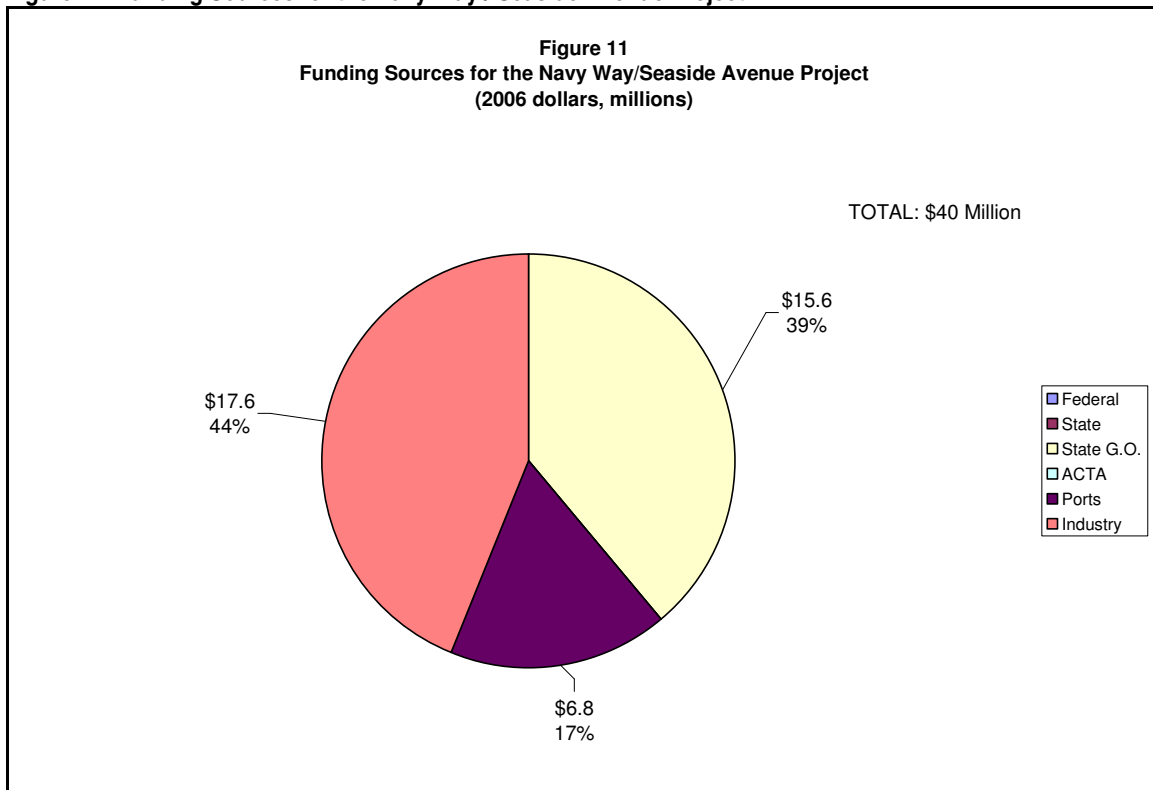


Figure 12: I-110 Connectors Project

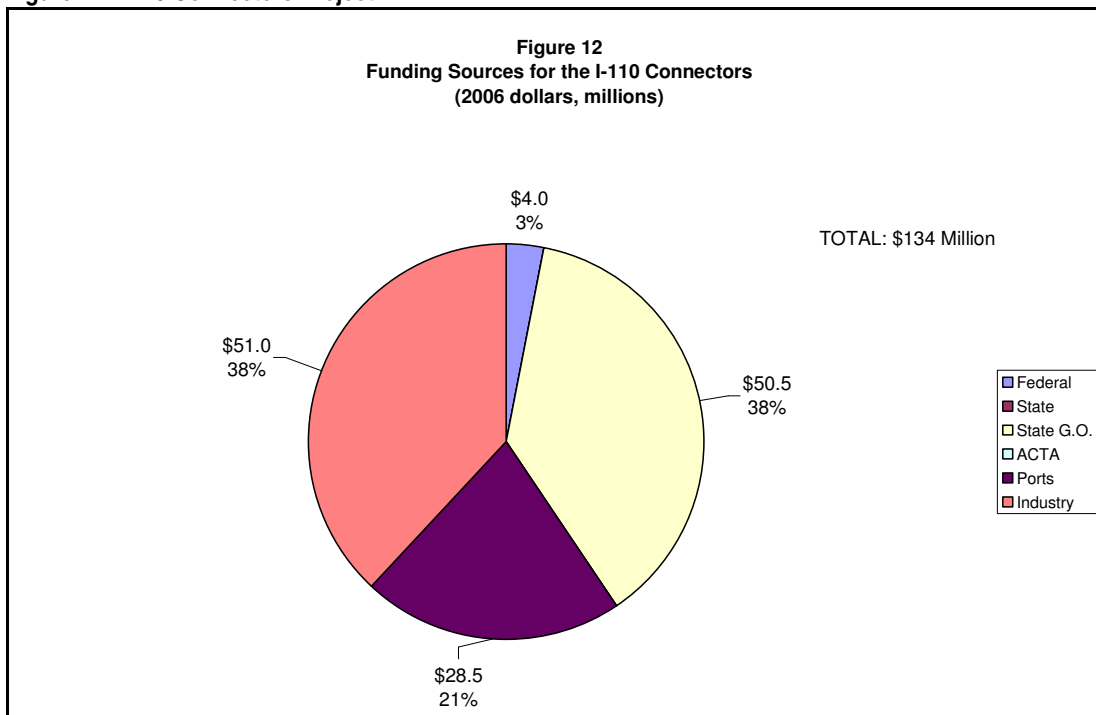


Figure 13: Funding Sources for the Ports Rail Systems

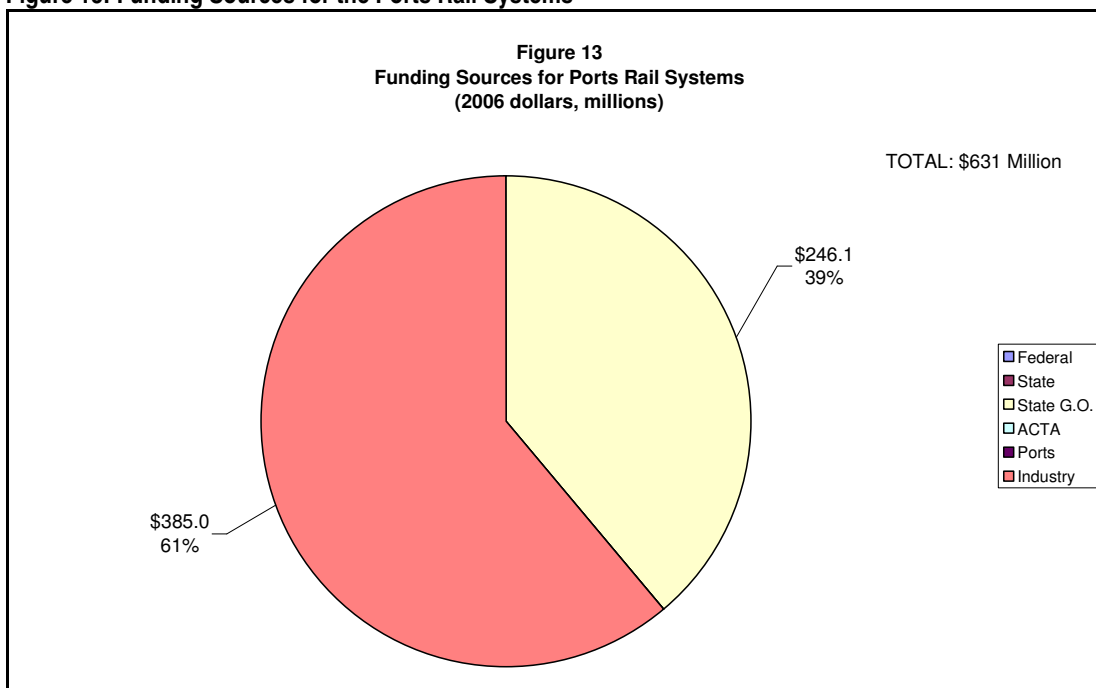


Figure 14: Funding Sources for I-10 from I-15 to Ford Street

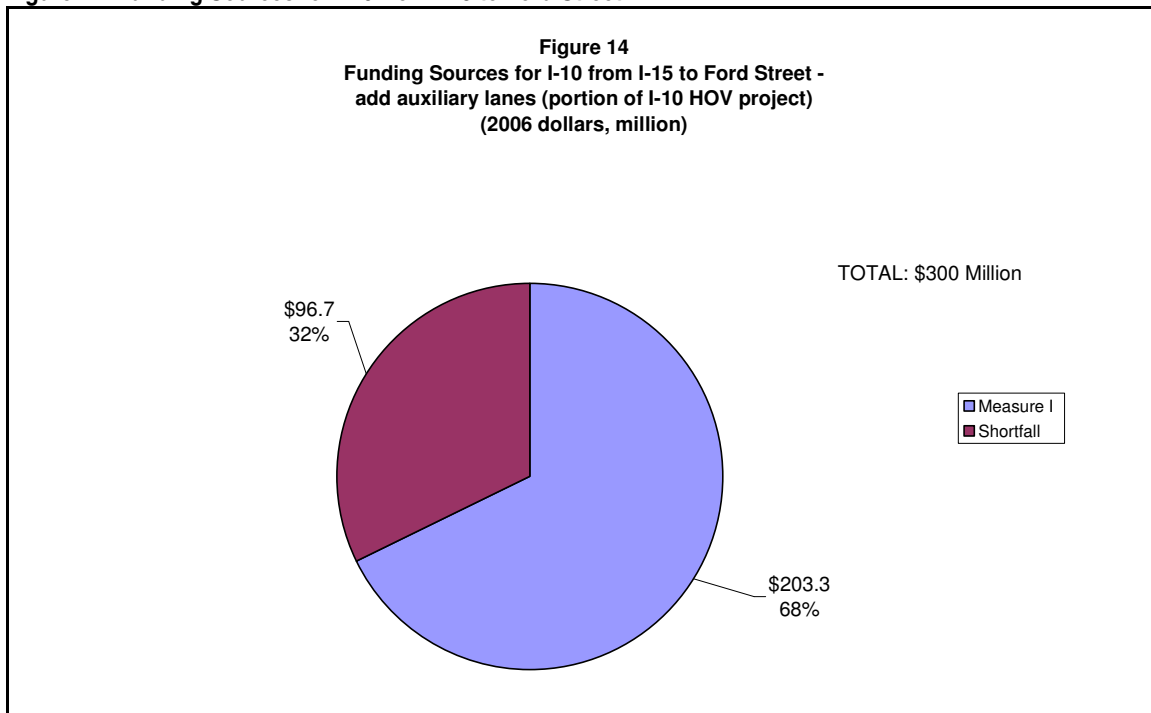
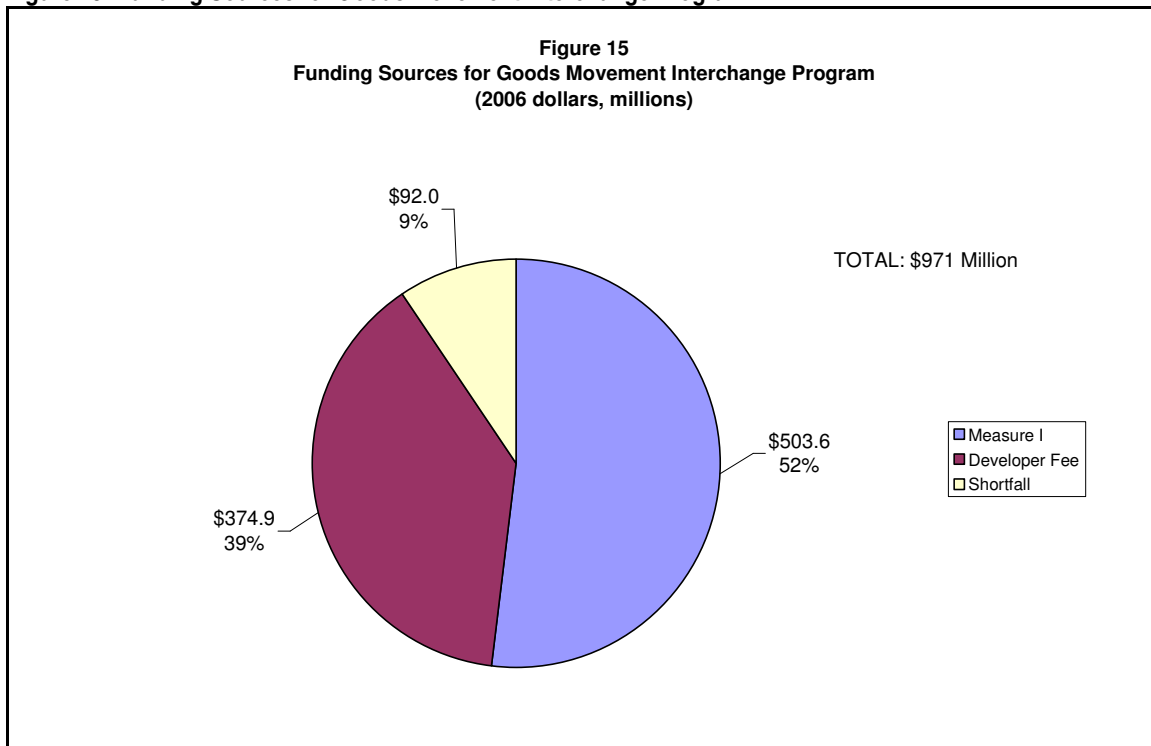


Figure 15: Funding Sources for Goods Movement Interchange Program



A substantial level of funding, from a variety of sources will be needed to incrementally implement the projects identified in this study. The following sections provide a menu of 45 potential funding sources that could be used to assist in implementing these projects. As shown in Appendix B, the funding sources are divided into six categories and represent a mixture of traditional funding sources and innovative sources: 1) Federal program; 2) State programs; 3) Regional programs; 4) Local programs; 5) User fees; and 6) Innovative Finance, Management of Funds, and Project Delivery Systems. These sources are discussed in greater detail following the table. Additionally, the project team has indicated which types of projects would likely be eligible for each source.

Finally, due the scarcity and competition for funding, as individual projects move forward it will be important for project sponsors to evaluate the strengths and weaknesses of a variety of funding sources. This will allow sponsors to target their efforts on those funding sources that will have the highest probability of success.

## **2.0 FEDERAL FUNDING SOURCES**

This section describes the potential federal revenue sources that could be considered by project sponsors. The potential federal revenue sources include discretionary grant programs, formula grant programs, and financing programs from the US Department of Transportation; freight programs identified in SAFETEA-LU; and potential funding from the Department of Defense.

- 1) Discretionary programs: for these programs, the overall dollar amount for the program is authorized by Congress and funding is provided either in the form of earmarks or the responsible agency determines the projects to be funded based on evaluations. Discretionary programs include:
  - i) High Priority Project Earmark
  - ii) Projects of National and Regional Significance
  - iii) National Corridor Infrastructure Program
  - iv) Interstate Maintenance Program
  - v) Highway Bridge Program
  - vi) Transportation Improvement Projects
  - iv) Transportation, Community, and System Preservation Program
- 2) "Core" programs: these are formula based programs. Under FHWA Core programs, the state receives a certain percentage of available funds based on allocation measures such as population, lane-miles of Federal-aid highways, total vehicle-miles traveled on those Federal-aid highways, estimated contributions to the highway account of the highway trust fund; or lane miles. These are then sub-allocated to the metropolitan planning organizations and regional transportation planning agencies within the state. Core programs include:
  - i) FHWA Surface Transportation Program;
  - ii) FHWA Congestion Mitigation and Air Quality Program; and
- 3) Loan and Financing Programs: these programs provide secured loans, loan guarantees, and lines of credit from the Federal government for surface transportation infrastructure projects. Loan and financing programs include:

- i) Transportation Infrastructure Finance and Innovation Act (TIFIA) program;
- ii) Section 129 Loans; and
- iii) Railroad Rehabilitation and Improvement Financing
- 4) Freight specific programs identified in SAFETEA-LU:
  - i) Freight Intermodal Distribution Pilot Grant Program; and
  - ii) Capital Grants for Rail Line Relocation Projects
- 5) Department of Defense (DOD) Programs including
  - i) Department of Homeland (DHS) Security Preparedness and Recovery Preparedness
  - ii) DOB Railroads for National Defense Program
  - iii) Defense Access Roads
  - iv) Military Construction Funds
  - v) Critical Infrastructure Funds

The five program categories are described in greater below.

### 2.1 Federal Discretionary Programs

Earmarked funds ensure an identifiable funding stream and advantage for any identified project. Congressional earmarks - especially if they are contained in both House and Senate versions of the reports accompanying the Transportation Appropriations measures - carry the special intent of Congress which means that these projects move ahead of others in the funding queue. Thus, Congressional earmarks often indicate a money trail and preference for key projects.

The ability to secure federal demonstration funding for project sponsors will be dependent on strong local, regional and state support and financial participation. It would also be dependent upon the project partners making a strong case that their project is a high priority within the region and the state.

#### High Priority Project Earmark

##### *Description*

High Priority Projects earmarked to receive federal funding are for transportation projects of special importance to members of Congress. Guaranteed funding is made up of two parts: (1) discretionary spending that is protected by firewalls that effectively wall off specified amounts of highway and transit spending from other discretionary spending; and (2) for the highway program, small amounts of mandatory funding, that is, funding exempt from the obligation limitation (Emergency Relief and \$639.00 million per year of the minimum guarantee funding).

A potential source to project sponsors in the pending SAFETEA-LU reauthorization, the process is driven by House/Senate authorization committees every six years and by appropriation committees each year. Amounts available in SAFETEA-LU and in subsequent multi-year legislative reauthorizations of federal transportation programs are discretionary funds that can be earmarked with a positive impact to the project.

Depending on the specific federal program from which funds are earmarked, funding committed to earmarked projects may result in a reduction in the level of funding available for other projects in the State and/or the region. If earmarks are sizeable in total this could require deferral of other programmed or planned regional projects.

Federal earmarks are spread widely throughout the US in increments of various sizes. Earmarks are generally a small percent of the total project costs. Within the 1998-2003 6-year period of TEA-21, a total of approximately \$9.30 billion was earmarked for 1,850 High Priority Projects nationwide. The average amount earmarked per project was \$5.00 million, with funding spread over 6 years. Of the total number of projects nationwide, 154 projects were in California. Over the 6-year SAFETEA-LU reauthorization period, approximately 5,200 High Priority Project were identified with funding levels ranging from \$10,000 to \$100,000,000. There are 158 California High Priority Projects identified in SAFETEA-LU with funding levels ranging from a low of \$12,800 to a high of \$12.4 million. The project-specific annual earmarks range in size from a low of \$2,800 to a high of \$7.50 million.

#### ***Project Categories***

High Priority Project earmarks could be used for highway, port and rail projects.

### **Projects of National and Regional Significance**

#### ***Description***

The Projects of National and Regional Significance (PNRS) program provides funding for high cost projects of national or regional importance. To be eligible for this funding source, a project must have a total eligible cost greater than or equal to the lesser of (1) \$500 million or (2) 75 percent of the amount of Federal highway funds apportioned to the State in which the project is located for the most recently completed fiscal year (estimated at \$337.5 million).

Eligible costs include development phase activities (including planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering and design work, and other preconstruction activities) and the costs of construction, reconstruction, rehabilitation, and acquisition of right-of-way, environmental mitigation, construction contingencies, acquisition of equipment, and operational improvements.

Applications for funding are solicited by the Secretary of Transportation and funding for projects is awarded competitively through an evaluation process modeled on the Federal Transit Administration (FTA) New Starts program. Projects are evaluated on the ability of the project to:

- generate national economic benefits;
- reduce congestion;
- improve transportation safety;
- enhance the national transportation system;
- garner support for non-Federal financial commitments and the degree to which Federal investment is leveraged;

- provide evidence of stable and dependable financing for construction, maintenance, and operation of the facility;
- use new technologies that enhance project efficiency; and
- help maintain or protect the environment

Similar to the FTA New Starts process, projects that rank well against the evaluation criteria prove the projects have significant benefit in the eyes of FHWA and Congress, which means that these projects will likely move ahead of others in the funding queue.

Six of the twenty-five projects listed in SAFETEA-LU were from California and included the following: Bakersfield Beltway System (\$140 million); Roadway improvements in and around the former Norton Air Force Base as part of the Inland Empire Goods Movement Gateway project (\$55 million); Alameda Corridor East (\$125 million); Transbay Terminal (\$27 million); Gerald Desmond/I-710 Gateway Project (\$100 million); and the Sacramento Intermodal Station (\$3 million).

#### ***Project Categories***

PNRS earmarks could be used for highway, port and rail projects.

### **National Corridor Infrastructure Improvement Program**

#### ***Description***

The National Corridor Infrastructure Improvement Program is a discretionary program that provides funding for construction of highway projects in corridors of national significance to promote economic growth and international or interregional trade.

Funding for projects will be awarded through a selection process conducted by the Secretary that:

- requires States to submit an application
- gives priority to projects in corridors that are part of, or will be part of, the Dwight D. Eisenhower National System of Interstate and Defense Highways after completion, and to projects that will be completed within 5 years of allocation of funds for the project.

Highway construction projects in corridors of national significance will be selected with consideration of the extent to which:

- the corridor links two existing segments of the Interstate System
- the project facilitates major multi-state or regional mobility, economic growth, and development in areas underserved by highway infrastructure
- commercial traffic in corridor has increased since enactment of NAFTA and where traffic is projected to increase in the future
- international truck-borne commodities movement through the corridor
- the project will reduce congestion on an existing segment of the Interstate
- the project will reduce commercial and other travel time through a major freight corridor



- Federal funds will be leveraged and the value of the cargo carried by commercial vehicle traffic in the corridor and the economic costs arising from congestion in the corridor

#### ***Project Categories***

The National Corridor Infrastructure Improvement Program is available for highway related projects.

### **Interstate Maintenance Program**

#### ***Description***

The 46,000 mile Dwight D. Eisenhower National System of Interstate and Defense Highways retains a separate identity within the national highway system. The Interstate Maintenance (IM) program, established under ISTEA and continued in SAFETEA-LU, provides for the on-going work necessary to preserve and improve Interstate highways. This includes funding for resurfacing, restoring, rehabilitating and reconstructing (4R) most routes on the Interstate System.

Authorizations totaling \$25.2 billion are provided through 2009 which includes \$500 million of authorized funds available at the discretion of the Secretary for high-cost, ready-to-go IM projects.

There are no regulatory criteria for selection of IM discretionary projects; however, the following criteria are also considered in the evaluation of candidates for this program:

- Leveraging of private or other public funding - Because the annual requests for funding far exceed the available IMD funds, commitment of other funding sources to complement the requested IMD funds is an important factor.
- State priorities - For States that submit more than one project, consideration is given to the individual State's priorities.
- Expeditious completion of project - Preference is also given to requests that will expedite the completion of a viable project over requests for initial funding of a project that will require a long-term commitment of future IMD funding. For large-scale projects consideration is given to the State's total funding plan to expedite the completion of the project.
- Transportation benefits and advantages that will be derived upon completion of the project.

Each year, usually around March, a memorandum is sent from the FHWA Headquarters Office of Program Administration to the FHWA division offices requesting the submission of candidate projects for the following fiscal year's funding. The FHWA division offices provide this solicitation request to the State transportation departments, who are the only agencies that can submit candidates. The State transportation departments coordinate with local governments and Metropolitan Planning Organizations (MPOs) within their respective States in order to develop viable candidate projects. The State transportation departments submit the candidate applications to the FHWA division office in their state. After the FHWA division office has reviewed the submission and ensured that the submission and all applications meet submission requirements, the FHWA division office sends the applications to the Office of Program Administration in Headquarters. Candidate projects are due in FHWA Headquarters usually around the middle of July.

The candidate project applications are reviewed and evaluated by the Office of Program Administration and an allocation plan is prepared for presentation of the candidate projects to the Office of the Federal Highway Administrator, where the final selection of projects for funding is made. The announcement of the selected projects and the allocation of funds are usually accomplished by the middle of November.

Seven California projects were included in the FY 06 IM Funding Program: Highway 156, Monterey County, \$500,000; I-10 Cypress Avenue Overcrossing, Fontana, \$1,000,000; I-15/Base Line Road Interchange, Rancho Cucamonga \$1,000,000; Reyes Adobe Interchange Project, Agoura Hills \$850,000; State Route 180 E Improvements, \$900,000; and Louise Avenue I-5 Interchange Improvements Project \$750,000.

#### ***Project Categories***

The IM Program is available for highway related projects.

### **Highway Bridge Program**

#### ***Description***

The Highway Bridge Program provides funding to enable States to improve the condition of their highway bridges through replacement, rehabilitation, and systematic preventive maintenance. SAFETEA-LU no longer requires that the bridges be considered “significantly important”. A total of \$21.6 billion is authorized for this program through 2009 to enable States to improve the condition of their eligible highway bridges over waterways, other topographical barriers, other highways and railroads. The requirement that each State spend at least 15% of its bridge apportionment for bridges on public roads that are not Federal-aid highways (off-system bridges) is retained, but the 35% cap is removed. The discretionary bridge program was funded only through 2005; beginning in 2006, \$100 million has been set aside annually to fund designated projects.

To be considered for this funding program, local agencies submit project applications and detailed eligible scopes of work and eligibility requirements. Caltrans evaluates the candidate projects for eligibility requirements and includes the successful candidate projects in the Highway Bridge Program and incorporated the projects into the Federal Transportation Improvement Plan (FTIP) and Federal Statewide Transportation Improvement Plan (FSTIP). Once their projects are in the FTIP and FSTIP, local agencies must request authorization to proceed according to the Local Assistance Procedures Manual to be eligible for project related cost reimbursement.

The federal reimbursement rate is 88.53% of the eligible participating project costs. Eligible project costs include: replacement, rehabilitation, painting, scour countermeasure, bridge approach barrier and railing replacement, low water crossing replacement, and ferry service replacement and also includes preliminary engineering and right of way costs.

#### ***Project Categories***

The Highway Bridge Program is available for highway related projects.

### Transportation Improvement Earmark

#### *Description*

The Transportation Improvements provision provides designated funding for specific projects identified in SAFETEA-LU. A total of 466 projects are identified, each with a specified amount of funding over the 5 years of SAFETEA-LU. For each project identified in SAFETEA-LU, the Secretary of Transportation will allocate a portion of the amount designated for that project: 10% in 2005, 20% for 2006, 25% for 2007, 25% for 2008 and 20% for 2009.

Examples of Southern California projects included in SAFETEA-LU under this funding program: Century Boulevard Pedestrian Safety and Transportation Improvements in City of Inglewood (\$3 million); Widen Northbound I-405 between I-10 and US-101 for HOV Lane (\$30 million); and Alameda Corridor East Construction Authority (\$30 million).

#### *Project Categories*

Transportation Improvements earmarks could be used for highway, port and rail projects.

### Transportation, Community and System Preservation (TCSP) Program

#### *Description*

This competitive program provides earmarked funds for projects that integrate transportation, community, system preservation, and the environment

Activities funded under the TCSP Program must address and integrate each of the purposes of the program listed below:

- Improve the efficiency of the transportation system.
- Reduce the impacts of transportation on the environment.
- Reduce the need for costly future public infrastructure.
- Ensure efficient access to jobs, services and centers of trade.
- Encourage private sector development patterns.

Two grants are provided under this program: planning grants and implementation grants.

- Planning assistance under the TCSP Program is intended to provide financial resources to explore integrating their transportation programs with community preservation and environmental activities. Grants will be awarded for planning activities that will achieve this integration, meet the purposes of the program described above and are innovative.
- Implementation assistance under the TCSP Program is intended to provide financial resources to enable agencies to carry out activities that address transportation efficiency while meeting community preservation and environmental goals.

Priority will be given to applicants that have already instituted preservation or development programs and policies that:

- Qualify for Federal highway and transit funding (to be determined by FHWA);
- Coordinate with State and locally adopted preservation and development plans;
- Integrate transportation and community and system preservation practices;
- Promote investments in transportation infrastructure and transportation activities that minimize adverse environmental impacts and lower total life cycle costs; and/or
- Encourage private sector investments and innovative strategies that address the purposes of the TCSP Program.

In FY 2005 the TCSP program distributed grants totaling \$25 million among 39 projects. Within California, two projects received grants in the amount of \$212,000 and one project received an \$848,000 grant. Beginning in FY 2006, the TCSP program is authorized at \$61.25 million per year through FY 2009.

### ***Project Categories***

The TCSP is available for highway related projects.

## **2.2 Federal Formula Programs**

### **Surface Transportation Program**

#### ***Description***

The Surface Transportation Program (STP) provides a flexible source of funds to be used on surface transportation infrastructure projects (except local streets and roads are currently not eligible). Additionally, SAFETEA-LU expands STP eligibilities to include advanced truck stop electrification systems, high accident/high congestion intersections, and environmental restoration and pollution abatement programs.

STP funds are provided through a transportation program administered by the FHWA and Caltrans. SAFETEA-LU legislation requires states to distribute STP funds in the following manner:

- 10 percent - Safety construction
- 10 percent - Transportation Enhancement Activities
- 50 percent - Regional STP, STP Local, and rural areas guaranteed return
- 30 percent - State discretionary

STP funds can be used for construction, reconstruction, rehabilitation, resurfacing, restoration and operational improvements for roads or highways and are programmed in the Interregional Transportation Improvement Plan (ITIP) and/or the Regional Transportation Improvement Plan (RTIP) by Caltrans and the regional transportation planning agencies respectively. STP funds are programmed in the State Transportation Improvement Program (STIP), with 75 percent programmed by the regional transportation

planning agencies and 25 percent programmed by Caltrans. As such, STP funds are considered under the State and Regional funding sources.

STP is discussed further under the State and Regional funding sources.

#### ***Project Categories***

STP could be used for all transportation project categories

### **National Highway System Program**

#### ***Description***

The National Highway System (NHS) Program provides funding for improvements to rural and urban roads that are part of the NHS, including the Interstate System and designated connections to major intermodal terminals.

The NHS is a 163,000-mile system of significant rural and urban roads serving major population centers, international border crossings, intermodal transportation facilities, and major travel destinations. The NHS Program provides funding for improvements to the Interstate System, other urban and rural principal arterials, highways that provide motor vehicle access between the NHS and major intermodal transportation facilities, the defense strategic highway network, and strategic highway network connectors.

SAFETEA-LU expands eligibility of NHS funding to include environmental restoration and pollution abatement to minimize the impact of transportation projects, control of noxious weeds and aquatic noxious weeds, and establishment of native species.

NHS funds are programmed in the STIP, with 75 percent programmed by the regional transportation planning agencies and 25 percent programmed by Caltrans. As such, NHS funds are considered under the State and Regional funding sources.

#### ***Project Categories***

NHS funds are primarily used for highway projects

### **Highway Safety Improvements Program**

#### ***Description***

SAFETEA-LU authorized the creation of a new core Federal-aid funding program beginning in FY 2006. The goal of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads

As part of SAFETEA-LU, the highway safety improvement program (HSIP) was established as a core program, separately funded for the first time, with flexibility provided to allow States to target funds to their most critical safety needs. A total of \$5.1 billion is provided for 2006-2009. The HSIP requires States to develop and implement a strategic highway safety plan (SHSP) and submit annual reports to the Secretary of Transportation that describe at least 5 percent of their most hazardous locations, progress in

implementing highway safety improvement projects, and their effectiveness in reducing fatalities and injuries.

The SHSP will be used in the HSIP to identify and analyze highway safety problems and opportunities, include projects or strategies to address them, and evaluate the accuracy of data and the priority of proposed improvements. The SHSP must be based on accurate and timely safety data, consultation with safety stakeholders, and performance-based goals that address infrastructure and behavioral safety problems on all public roads. States are also required to develop an evaluation process to assess results and use the information to set priorities for highway safety improvements. States that do not develop a strategic plan by October 1, 2007, will be locked in at their FY 2007 HSIP apportionment level pending development of a plan. States with SHSPs have additional flexibility to use up to 10% of their HSIP funds for behavioral and other safety projects if they meet rail grade crossing and infrastructure safety needs as defined in their SHSPs.

#### ***Project Categories***

SHSP funds are primarily used for highway projects

### **Congestion Mitigation and Air Quality Program**

#### ***Description***

The Congestion Mitigation and Air Quality (CMAQ) program provides a flexible funding source to State and local governments for transportation projects and programs that improve air quality and reduce congestion and help meet the requirements of the Clean Air Act. Federal funds are apportioned according to a formula based on population and severity of pollution in ozone and carbon monoxide areas. A number of projects identified in this report are considered key project in the region's air quality conformance plan. Funds are programmed at the discretion of the MPOs.

CMAQ funds are available for capital and O&M related activities. Projects classified as Transportation Control Measures (TCM) are eligible. TCM projects may be transit, high occupancy vehicle lanes, demand management programs, signal coordination, and bicycle facilities. O&M costs can be funded for up to three years.

#### ***Project Categories***

CMAQ could be used for all transportation project categories

## 2.3 Federal Formula Programs

The Federal government can assist project sponsors in securing short and/or long term financing through the extension of credit assistance in the form of loans, loan guarantees, and letters of credit. The major federal credit assistance programs are provided through the Transportation Infrastructure Finance and Innovation Act, the Section 129 loan program, and the Railroad Rehabilitation and Improvement Financing Program.

### Transportation Infrastructure Finance and Innovation Act

#### *Description*

The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) was enacted as part of the Transportation Equity Act for the 21st Century (TEA-21), the predecessor to the Safe, Accountable, Flexible, Efficient Transportation Equity Act : A Legacy for Users (SAFETEA-LU), the current transportation authorization bill.

The TIFIA program provides project sponsors with secured loans, loan guarantees, and lines of credit from the Federal government for surface transportation infrastructure projects of national or regional significance. Under SAFETEA-LU, eligibility extends to any highway, transit or railroad project in excess of \$50 million in cost, and can include intermodal facilities, border crossing infrastructure, expansion of multi-State highway trade corridors, and other investments with regional and national benefits. The program leverages Federal funds by encouraging co-investment. TIFIA credit assistance cannot exceed 33 percent of total project funding. In addition, an objective of the TIFIA program is to encourage private sector participation in project financing.

The Secretary of U.S. Department of Transportation (U.S. DOT) selects the projects to receive TIFIA credit assistance through a competitive application process administered by the TIFIA Joint Program Office. TIFIA projects are selected on the basis of eight statutory criteria, including national or regional significance; creditworthiness; private participation; acceleration of project schedules; use of new technologies; reduction in the level of federal budget authority required for loans versus grants; environmental stewardship; and reduction of Federal grant assistance.

Over the 1999-2006 period in which TIFIA has been in existence, a total of \$10.6 billion in credit assistance has been made available through the program. Of this total, as of February 2006, a total of \$3.2 billion in credit assistance has been committed to 15 projects totaling \$12.6 billion in cost. The types of credit commitments consist of 12 projects with direct loans, two projects with a combination of direct loan and line of credit, and one project with a loan guarantee.

Table 1 summarizes the types of revenues pledged for repayment of the user-backed financings and tax-backed financing proposed to be issued with TIFIA assistance. While revenues pledged for repayment of user-backed financings are principally from tolls, other forms of repayment include commercial lease payments, retail rents, and rental car customer facility charges. Revenues pledged for repayment of tax-based financings consist of various forms of state, county, and local taxes and multi-year revenue streams, including property, sales, and hotel taxes and fuel excise taxes.



**Table 1**  
**Revenues Pledged for Repayment of TIFIA Financing**

User-Backed Financings	Credit Instrument Type	Pledged Revenues
Miami Intermodal Center Rental Car Facility	Direct Loan	Rental Car Customer Facility Charges
State Route 125 Toll Road	Direct Loan	Facility Tolls
Farley Penn Station	Direct Loan and Line of Credit	Commercial Lease Payments / Retail Rents
Moynihan Station	Direct Loan and Line of Credit	Lease Income
Central Texas Turnpike	Direct Loan	Facility Tolls
San Francisco/Oakland Bay Bridge	Direct Loan	System-wide Facility Tolls
Warwick Train Station	Direct Loan	User Charges
US 183 A Toll Road	Direct Loan	Facility Tolls
Louisiana 1 Elevated Toll Facility	Direct Loan	Facility Tolls
Tax-Backed Financings	Credit Instrument Type	Pledged Revenues
Miami Intermodal Center General Program	Direct Loan	State Fuels Excise Taxes
Washington Metro Capital Improvement Program	Loan Guarantee	Local Government Contributions
Tren Urbano, Puerto Rico	Direct Loan	Various Commonwealth Taxes
Cooper River Bridge	Direct Loan	State and County Contributions
Staten Island Ferries and Terminals	Direct Loan	Tobacco Settlement Payments
Reno Transportation Rail Access Corridor	Direct Loan	Local Taxes (Sales, Hotel, Property) and Assessment District Revenues

Source: <http://tifia.fhwa.dot.gov/projects.htm>, March 2007.

As noted in the *U.S. Department of Transportation: Transportation Infrastructure Finance and Innovation Act Report to Congress, June 2002*, the public policy underlying the TIFIA credit program is for the Federal government to supplement, but not supplant existing capital finance markets for large transportation infrastructure projects. Section 1502 of TEA-21 stated “a Federal credit program for projects of national significance can complement existing funding resources by filling market gaps, thereby leveraging substantial private co-investment.”

Because the TIFIA program offers credit assistance, rather than grant funding, its potential users are infrastructure projects capable of generating their own revenue streams through user charges or other dedicated sources of funding. The secured loans, loan guarantees, and lines of credit available through the TIFIA program can be used as an alternative to bonding and/or in combination with bonding.

#### ***Project Categories***

TIFIA funds can be used on highway, freight rail, and port projects, including intermodal freight transfer facility projects. Projects must meet the applicable Federal grant funding rules, including planning, right-of-way acquisition, competitive procurement, and Buy America requirements.

#### **Section 129 Loans**

##### ***Description***

The National Highway System Designation Act (NHS) established the Section 129 Loan Program as a mechanism to allow States to offer low interest loans to project sponsors. States can use their federal-aid highway apportionment funds for any Federal-aid highway project and can offer loans to either public or private project sponsors.

The Section 129 loan process includes the following activities:

- The State DOT identifies project(s) for a potential loan and the dedicated revenue source(s) for loan repayment;
- The State requests authorization of Federal-aid funding for the loan to the project and provides written assurance that a repayment pledge has been secured;
- The State negotiates a loan repayment schedule and terms with the project sponsor;
- FHWA determines if requirements are met, then approves the project for a loan and executes a project agreement;
- The State DOT makes the loan to the project sponsor;
- The State obligates the funds and receives the Federal share of the loan;
- The project sponsor (borrower) repays the loan on an approved schedule; and
- The State uses the loan repayments to make grants or loans to other eligible projects

Loans can provide funding for up to 80 percent of the total project costs as long as the State can document that sufficient funds have been secured for loan repayment. The loan's interest rate is determined by the State but the rates must be below the market rate and the project must receive a financial benefit.

Loan repayment to the State by project sponsors must begin within five years following the project being completed. The total loan must be repaid within 30 years from the date Federal funds were authorized. Two additional requirements on the project sponsors include: 1) committing dedicated revenue source funds to repay the loan; and 2) not being allowed to use federal funds for loan repayment. Dedicated revenue sources for sponsors may include but not be limited to tolls, excise taxes, sales taxes, property taxes, motor vehicle taxes, and/or other beneficiary fees.

Among the benefits of the Section 129 Loan Program are:

- States have an opportunity for the funds to be recycled and re-used in the transportation system through a process where federal-aid highway funds are lent out, repaid by project revenues and then recycled on other projects; and
- States can subordinate Section 129 Loans and give investors and bondholder first lien on the project revenues. This subordination improves debt service coverage owed and acts as a credit enhancement.

There has been limited use of Section 129 loans by project sponsors. One key reason is the competition from the TIFIA program described previously. TIFIA created a federally administered credit opportunity and, more importantly, a new revenue source for the same kinds of projects that would likely use Section 129 loans. Additionally, SAFTEA-LU's reduction of TIFIA's minimal threshold for projects to \$50 million makes the Section 129 Loan program less competitive. However, for projects that do not fit the requirements of the TIFIA program, Section 129 Loans remain a good alternative. For example, the George Bush Turnpike in Dallas used a Section 129 loan to overcome significant financial barriers and resulted in the project being completed over a decade sooner than would have been possible under traditional pay-as-you-go financing.

#### ***Project Categories***

Traditionally, Section 129 Loans have been considered for highway projects. However, the FHWA Resource Center also noted that the Environmental Protection Agency is interested in using this program to support truck rest-stop idling services. Eligible project costs include: engineering; right-of-way acquisition, and construction, as long as the costs are incurred after FHWA authorizes the loan.

### **Railroad Rehabilitation and Improvement Financing (RRIF) Program**

#### ***Description***

The RRIF program provides financial assistance in the form of direct loans or loan guarantees to eligible participants for the purpose of: 1) acquiring, improving, or rehabilitating intermodal, rail freight, passenger equipment or facilities, including track, components of track, bridges, yards, building or shops; 2) to refinance outstanding debt incurred for these purposes; or 3) to develop or establish new intermodal or rail facilities.

Direct loans can be made for up to 100% of the total project cost, for terms up to 25 years at an interest rate equal to the cost of borrowing for a comparable term based on the current Treasury rate at the time of closing. Loan guarantees can be made up to 80% of the cost of a loan, for terms up to 25 years, at a rate the Secretary determines reasonable taking into account prevailing interest rates and customary fees incurred under similar obligations in the private capital market.

Additionally, the following changes included in SAFETEA-LU amended the RRIF program:

- **Expansion of eligible applicants:** SAFETEA-LU expanded the type of entities eligible for the RRIF program to include limited option shippers and commuter railroads.
- **Expansion of the list of projects to be given priority consideration:** SAFETEA-LU added to the list of eligible projects to include those that "enhance service and capacity in the national rail system" and "would materially alleviate rail capacity problems which degrade the provision of service to shippers and would fulfill the need in the national transportation system." These two types of projects were included to address congestion on the nationally important rail lines.
- **Expanding RRIF assistance levels:** SAFETEA-LU expanded the total authority for outstanding RRIF financial assistance from \$3.5 billion to \$35 billion and amount reserved for small and

regional railroads increased from \$1 billion to \$7 billion. Additionally, the Secretary may not establish a limit on the amount that could be used for one direct loan or loan guarantee.

- **Requirement for Collateral:** SAFETEA-LU provides that the Secretary may not require an applicant to provide collateral and that any collateral provided be valued at going concern value after giving effect to the present value of the improvement.

Table 2 summarizes the RRIF loan agreements that have been provided since 2002.

**Table 2**  
**Summary of Railroad Rehabilitation and Improvement Financing Program Agreements**

Organization	Year	Amount
Iowa Northern Railroad	2006	\$25.5 million
Wheeling & Lake Erie Railway	2006	\$14 million
Iowa Interstate Railroad	2006	\$9.35 million
Great Smoky Mountains Railroad	2005	\$7.5 million
Riverport Railroad	2005	\$5.5 million
The Montreal, Maine & Atlantic Railway	2005	\$34 million
Tex-Mex Railroad	2005	\$50 million
Iowa Interstate Railroad	2005	\$32.7 million
Stillwater Central Railroad	2004	\$4.6 million
Wheeling & Lake Erie Railway	2004	\$25 million
Arkansas & Missouri Railroad	2003	\$11 million
Nashville and Western Railroad	2003	\$2.3 million
Dakota, Minnesota & Eastern Railroad	2003	\$233 million
Amtrak	2002	\$100 million
Mount Hood Railroad	2002	\$2.07 million

Source: <http://www.fra.dot.gov/us/content/177>, March 2007.

## 2.4 Freight Programs in SAFETEA-LU

### Freight Intermodal Distribution Pilot Grant Program

#### *Description*

SAFETEA-LU establishes a new program to facilitate and support intermodal freight transportation initiatives at the State and local levels to relieve congestion and improve safety; and to provide capital funding to address infrastructure and freight distribution needs at inland ports and intermodal freight facilities. Eligible projects from this program would include those that help relieve congestion, improve transportation safety, facilitate international trade, and encourage public/private partnership. Also eligible are projects for the development and construction of intermodal freight distribution and transfer facilities at inland ports.

In selecting projects for grants, the Secretary of DOT gives priority to projects that will:

- b) reduce congestion into and out of international ports located in the United States;
- c) demonstrate ways to increase the likelihood that freight container movements involve freight containers carrying goods; and
- d) establish or expand intermodal facilities that encourage the development of inland freight distribution centers.

SAFETEA-LU provided \$30 million over 5 years (2005-2009) for 6 designated projects: (A) Short-haul intermodal projects, Oregon, \$5,000,000; (B) The Georgia Port Authority, \$5,000,000; (C) The ports of Los Angeles and Long Beach, California, \$5,000,000; (D) Fairbanks, Alaska, \$5,000,000; (E) Charlotte Douglas International Airport Freight Intermodal Facility, North Carolina, \$5,000,000; (F) South Piedmont Freight Intermodal Center, North Carolina, \$5,000,000.

### Capital Grants for Rail Line Relocation Projects

#### *Description*

SAFETEA-LU establishes a new capital grants program for local rail line relocation and improvement projects. A State is eligible for a grant for any construction project for the improvement of the route or structure of a rail line that either is carried out for the purpose of mitigating the adverse effects of rail traffic on safety, motor vehicle traffic flow, community quality of life, or economic development; or involves a lateral or vertical relocation of any portion of the rail line.

The Secretary of DOT considers the following factors when determining if a state is eligible for this grant program:

- (1) The capability of the State to fund the rail line relocation project without Federal grant funding.
- (2) Equitable treatment of the various regions of the United States.

- (3) The effects of the rail line, relocated or improved as proposed, on motor vehicle and pedestrian traffic, safety, community quality of life, and area commerce.
- (4) The effects of the rail line, relocated as proposed, on the freight and passenger rail operations on the rail line.

Approximately \$350 million per year (2006-2009) is available with a \$20 million maximum grant for a project.

## 2.5 Department of Defense

### DHS Preparedness and Recovery Preparedness Grant Program

#### *Description*

The Department of Homeland Security has targeted six critical areas for funding: intelligence and warning, border and transportation security, domestic counterterrorism, protecting critical infrastructure, defending against catastrophic terrorism, and emergency preparedness and response. The mission areas focus on preventing terrorist attacks, reducing National vulnerabilities, and on minimizing the damage and maximizing recovery from attacks that do occur. The mission areas provide a framework for aligning the resources of the federal budget directly to the task of securing the homeland.

Of potential relevance to the rail and highway projects included in this report are the protecting critical infrastructure and emergency preparedness and response components of the six targeted areas identified by the Department of Homeland Security.

As determined by the Secretary of Homeland Security, the Preparedness and Recovery Preparedness Discretionary grant program was provided \$1.15 billion in grant to state and local agencies in FY 2006. Of this total, \$765,000,000 was to be used in high-threat, high density urban areas; \$175,000,000 will be for port security grants; and \$150,000,000 will be for intercity passenger rail transportation, freight rail, and transit security grants.

#### *Project Categories*

DHS discretionary grants could be used for all transportation projects.

### DOD Railroads for National Defense Program

#### *Description*

Under Department of Defense Directive 4510.11, the Department of Defense established a special program to identify and protect commercial railroad infrastructure important for defense purposes. The program is administered by the Military Surface Deployment and Distribution Command Transportation Engineering Agency (SDDCTEA). SDDCTEA's mission is to "provide the DOD with the research, engineering, and analytical expertise to improve the deployability of U.S. Armed Forces, the transportability of military equipment, the infrastructure of the defense transportation system, and the management and execution of the DOD transportation programs for national defense." Under this program, DOD assures that its civil and commercial sector rail requirements are met, including:

- Identify and protect the civil rail lines important for movements in peace and war;
- Assist the military services in identifying installations that require rail service;
- Work with FRA, State rail planners, installations, and the commercial rail carriers in developing and coordinating the Strategic Rail Corridor Network (STRACNET) and STRACNET connector lines;
- Develop and publish the STRACNET Report; and
- Work to ensure that necessary commercial rail infrastructure is in place for rapid rail deployment capability from designated power projection platform installations.

DOD funding from this program would be considered annually through the Military Construction (MILCON) appropriations bills considered by Congress and proposed by the Administration.

#### ***Project Categories***

This program could be used for rail projects only.

### **3.0 STATE FUNDING SOURCES**

Four state funding programs were considered as potential sources for projects listed in this report: the Interregional Improvement Program component of the State Transportation Improvement Program (STIP), Grant Anticipation Revenue Vehicle (GARVEE) bonds, proceeds from the State infrastructure bonding, and the Transportation Finance Bank Revolving Loan Program. As well, there are over \$2 billion in goods movement infrastructure projects recommended for funding through the Trade Corridor Improvement Fund Program (TCIF). Refer to Appendix D for more information and the list of projects nominated for funding through the TCIF.

#### **STIP: Interregional Transportation Improvement Program**

##### ***Description***

The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System. The STIP is funded primarily from the State Highway Account, whose principal sources of funds are excise taxes on motor-vehicle fuels, commercial-vehicle weight fees, and funds from the federal Core programs. This account commits major resources for improving the interregional road system, providing highway safety, and ensuring the efficient operation of the state transportation system.

The CTC adopts the Caltrans five-year estimate of available funds for transportation projects. The Commission schedules most of the State's new transportation projects through the STIP prioritization process, which allows regional agencies and Caltrans to participate. As reflected in the 2006 STIP Guidelines, the CTC has adopted a specific list of performance indicators and measures to assist regional agencies in the quantitative and qualitative evaluation of candidate STIP projects.

STIP capital improvement funding goes to two broad programs: 75 percent of the funding goes to the Regional Improvement Program (see the Regional Sources section below) and 25 percent goes to the Interregional Transportation Improvement Program (ITIP). California state law further subdivides the funding

for both the regional program and a portion of the interregional program by formula into county shares. For the ITIP, Caltrans recommends projects, with input from the regional agencies.

The over-arching theme of the ITIP is to provide “funding for projects to improve the interregional movement of people and goods to and through urbanized areas. The Interregional Transportation Strategic Plan (ITSP) serves as a guide to be used in programming ITIP funds for completion of key portions of the freeway and expressway system and the intercity passenger rail program. Key program themes are:

- Complete the ITSP focus routes;
- Reduce congestion and promote livable communities;
- Improve goods movement; and
- Encourage rural funding partnerships.

As noted above, Caltrans is the responsible agency for prioritizing and programming the 25 percent of STIP funds that comprise the ITIP. Based on the policies and guidelines for ITIP, 60 percent of the ITIP funds are required to be used for interregional roads that are outside the boundaries of urbanized areas with a population of more than 50,000 and for inter-city rail projects. A minimum of 15 percent of these funds (or 9 percent of the entire ITIP) must be used for intercity rail improvements, including grade separation projects.

The remaining 40 percent of the ITIP funds can be for projects that are needed to facilitate the interregional movement of people and goods, including state highway, intercity passenger rail, mass transit guideway, or grade separation projects in either urbanized or non-urbanized areas. Of the 40 percent from the original 25/75 split, 40 percent goes to County Group 1 (the 45 Northern California Counties), and 60 percent goes to County Group 2 (the 13 Southern California Counties). These percents are formula-based: 75 percent is based on county population in relationship to the county group’s population, and 25 percent is based on state highway miles in relation to the county group’s state highway miles. Thus, the maximum level of funding available statewide provides a ceiling on the level of interregional funds the projects any one county may receive in any one year.

Based on the April 2006 California Transportation Commission Staff Recommendations, two new programming years, 2009-10 and 2010-11, were added to the STIP with over \$1.9 billion in new capacity. The 2006 STIP differed from prior STIPs in that it required the programming of projects in three distinct categories, reflecting the restrictions on two of its major funding sources. The new capacity includes about \$455 million for highway projects, \$1.355 billion for rail and transit projects, and \$116 million for transportation enhancement (TE) projects. The most serious challenge facing the Commission is that project nominations from Caltrans and regional agencies far exceeded the available capacity for highway projects. The Commission’s adoption of the 2006 STIP left about \$780 million in highway proposals out of the STIP while \$730 million in rail and transit capacity remained unprogrammed, subject to future STIP amendments.

### ***Project Categories***

ITIP funds could be used for all transportation projects.



#### Grant Anticipation Revenue Vehicle (GARVEE) Bond Program

##### *Description*

The State of California has the legal capacity to use GARVEE bond financing to infuse funds into transportation in the near term. GARVEE bonds are tax-exempt debt instruments where future federal-aid highway funds in the State Highway Account are pledged to meet debt service requirements on bonds issued to fund transportation projects. GARVEE bonds are issued by the State and backed by annual federal appropriations for federal-aid transportation projects. In authorizing the use of GARVEE financing in California, the State Legislature intended to accelerate the funding and construction of critical transportation infrastructure projects and provide congestion relief benefits to the public significantly sooner than would be possible using pay-as-you-go traditional funding mechanisms.

By State policy, annual GARVEE debt service is limited to 15 percent of total federal revenues deposited in the State Highway Account for any consecutive 12-month period within the preceding 24 months. Each bond must be structured for debt service payments over a term of no more than 12 years.

The California Transportation Commission has the authority to select projects for accelerated construction through the use of GARVEE bonding. The selection would be through the programming process for the STIP and the State Highway Operation and Protection Program (SHOPP). The projects with the most potential for GARVEE funding are major improvements to corridors and gateways for interregional travel and goods movement. Major improvements include projects that increase capacity, reduce travel times, or provide long-life rehabilitation of key bridges or roadways.

The use of GARVEE bond financing was the result of the State's fiscal situation that severely restricted the level of ITIP (and RTIP) funding prior to 2004. On March 10, 2004, the State issued \$657,713,000 State of California (California Department of Transportation) Federal Highway Grant Anticipation Bonds Series 2004A, the first and only issuance of GARVEE obligations to date. The bond proceeds are being used to pay a portion of the costs of acquisition of right-of-way and/or construction for eight projects approved by the CTC for funding.

Until the passage of the 2007 State Budget, the State's transportation funding situation continued to be significantly impaired due to General Fund loans, transfers of transportation funds out of the program, and other factors intended to improve the State's overall General Fund condition. Due to the lack of transportation funds, GARVEE bond financing was suspended until federally-required State matching funds could be identified. With the 2007 Budget, some of the transportation funding borrowed by the State will be repaid, however there were no GARVEEs issued.

##### *Project Categories*

If available, GARVEE funds could be used for all transportation projects.

#### Transportation Finance Bank (TFB) Revolving Loan Program

##### *Description*

The TFB Revolving Loan Program was implemented to provide flexible, short-term financing to public entities and public/private partnerships for the purpose of accelerating the delivery of transportation projects in California. The program was initiated in 1998 as one of the State Infrastructure Banks (SIB) authorized in

TEA-21, and was capitalized with \$3 million in federal funding. With no activities in the program, in 2002 Caltrans initiated state legislation (AB2996, Chapter 805, Statutes of 2002) to take over responsibility for the program from the California Technology, Trade, and Commerce Agency. Caltrans developed guidelines and loan application documents which were approved by the CTC in January 2003.

Loans are available to local public entities and public/private partnerships. Any local transportation planning agency or county transportation commission may apply for a loan. Additionally, projects must be included in a Federal State Transportation Improvement Program (FSTIP) and must comply with all other Federal requirements, including National Environmental Policy Act, Americans with Disabilities Act, and Davis-Bacon Act requirements, as appropriate. Loans are available for any phase of an eligible project, but funding will be provided only for authorized expenditures incurred after the Commission has approved the loan.

Other requirements include but are not limited to, the following:

- The borrower must agree to provide collateral in the form of a pledge of county share allocations.
- The borrower will be solely responsible for ensuring that the project is in compliance with all applicable federal, state, and local laws, rules, regulations, and/or policies.
- The borrower must provide a financial plan for each project containing the required financial information.
- The borrower must demonstrate that the project has a high probability of resulting in a completed facility.

Under the initial guidelines for the TFB, loan amounts could not be less than \$300,000 or over \$1 million, with a maximum loan term of 6 years. While the program has not been active, it could potentially be reactivated with improvements in the status of the State's transportation revenues.

### ***Project Categories***

If available, TFB funds could be used for all transportation projects.

## **State Infrastructure Bonding and GoCalifornia Program**

### ***Description***

Governor Schwarzenegger has proposed the Strategic Growth Plan, part of which is a historic comprehensive transportation investment package that incorporates GoCalifornia, a mobility action plan designed to decrease congestion, improve travel times, and increase safety. The Governor's Strategic Growth Plan for transportation proposed to reduce congestion below today's levels while accommodating future transportation demands from growth in the population and the economy. This would be done by both deploying demand management strategies that change how and when people drive and building new capacity to increase "throughput" in the system. It would improve mobility and accessibility to move people, goods, and services through a comprehensive, integrated, multimodal, world class transportation system. This effort would require innovation in transportation planning, construction and management, sustained coordination among regional transportation agencies and the state, and dedicated funding.

The Governor's GoCalifornia plan identified over \$100 billion in transportation improvements to be funded through a combination of sources including but not limited to: Proposition 42 funds, general obligation

bonds, GARVEE bonds, revenue bonds, existing and planned local sales tax measures, public-private partnerships and increased federal funding.

As part of the funding for the Governor's GoCalifornia Program, on November 7, 2006 voters statewide approved four bond measures. Of the four, Proposition 1B provides \$19.925 billion for transportation and could be a significant state funding source for the many of the projects identified in this report. The \$19.925 billion Transportation and Air Quality Bond Package includes the following components:

- **Corridor Mobility Improvement Account (CMIA)** - \$4.5 billion will be deposited in the CMIA to be available to the CTC, upon appropriation in the annual Budget Bill by the Legislature, for allocation for performance improvements on the state highway system or major access routes to the state highway system.
- **Trade Corridor Improvement Fund** - \$2.0 billion will be deposited in this fund, available to the CTC upon appropriation in the annual Budget Bill by the Legislature and subject to such conditions and criteria as the Legislature may provide by statute, for infrastructure improvements along federally designated "Trade Corridors of National Significance" in this state or along other corridors within this state that have a high volume of freight movement. The CTC is to consult the Trade Infrastructure and Goods Movement Plan, trade infrastructure and goods movement plans adopted by regional transportation planning agencies, regional transportation plans, and Cal-MITSAC Statewide Port Master Plan.
- **STIP Augmentation** - Proposition 1B authorized \$2.0 billion in general obligation bond proceeds to be available for projects in the STIP to augment funds otherwise available for the STIP from other sources. Under the Bond Act, the funds will be deposited in the newly created Transportation Facilities Account (TFA) and will be available, upon appropriation by the Legislature, in the same manner as other STIP funds.
- **State - Local Partnership Program Account** - The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by the voters as Proposition 1B on November 7, 2006, includes \$1.0 billion to be deposited into the newly created program. The funds will be available to the California Transportation Commission, upon appropriation by the Legislature and subject to such conditions and criteria as the Legislature may provide by statute, for allocation over a five-year period to eligible transportation projects nominated by an applicant transportation agency. A dollar for dollar match of local funds is required for an applicant transportation agency to receive state funds under this program.
- **SHOPP** - \$750.0 million will be deposited in the newly created Highway Safety, Rehabilitation, and Preservation Account for highway safety, rehabilitation, and pavement preservation projects. Of this, \$250.0 million will be available for traffic light synchronization projects or other technology-based improvements to improve safety operations and the capacity of local streets and roads. Funds will be available to the Caltrans upon appropriation by the Legislature, for the purposes of the state highway operation and protection program.

### ***Project Categories***

State infrastructure bonds could be used for all transportation projects.

#### California Public Utilities Commission Section 130 Program

##### *Description*

The Section 130 Program provides federal funds to improve safety at existing at-grade highway-rail crossings. The purpose of Section 130 Program is to reduce the number, severity and potential of hazards to motorists, bicyclists, and pedestrians at highway-rail at-grade crossings.

The Section 130 program is a cooperative effort between the FHWA, Caltrans, California Public Utilities Commission (CPUC, or the Commission), railroad companies and local agencies. FHWA delegated the authority to manage this program to Caltrans in cooperation with the California Public Utilities Commission.

Crossings are selected for inclusion in the state wide funding list based on their hazard potential. There are a number of sources the Commission staff uses to target crossings that present a high hazard potential. These include the FRA's Web Accident Prediction System, the Commission's database to identify crossings with multiple accidents, local agencies, and railroads.

Commission staff reviews each targeted crossing. The review determines which crossings are considered for Section 130 funds. This is based upon such factors as the federal program requirements, eligibility criteria, and if there are improvements which can be made to reduce hazards that are covered by the Section 130 program.

An in depth diagnostic review is conducted for each crossing that will be considered for Section 130 funds. These crossings are then given a priority ranking based on several factors, including the U.S. DOT Accident Prediction Formula. Due to the finite amount of funding, the final priority list is created based on the highest ranking crossings. Commission staff provides the final priority list to Caltrans. Caltrans develops a funding schedule and solicits plans, specifications, and cost estimates (PS&E) for the scheduled projects. Upon approval of the PS&E, Caltrans will enter into a construction contract agreement with the railroad, and as necessary, the local agency. Caltrans uses the final priority list to allocate funding in order of priority.

All projects with improvements to only warning devices, illumination of the crossing, and signals may be funded 100% under the Section 130 Program. For projects that include safety improvements beyond that scope, the Section 130 Program may fund 90% of the total project cost. The city or the county may be required to pay the remaining 10% of the total cost. The railroad can voluntarily pay the local agency's 10% share.

Two or more crossings that are located within the electronic advance warning circuitry limits are considered a corridor project. PUC staff will not initially nominate corridor projects, as they require a greater commitment from the railroad or local agency. Corridor projects are limited to a maximum coverage of \$1 million, and generally require a larger percentage match in funding by the railroad or local agency. New corridor projects will only be approved by joint agreement with Caltrans, the Commission, and the local agency/railroad.

FHWA provides approximately \$10 million annual for the State's Section 130 Program to fund improvements to the over 11,000 public grade crossings statewide. On an annual basis, between 20-30 crossing improvements are selected from a screened priority list of over 100 candidate projects. Under SAFETEA-LU, the Section 130 Program will continue as part of the State's larger Strategic Highway Safety Program.

##### *Project Categories*

Section 130 funds could be used for highway and rail projects.

## California Public Utilities Commission Section 190 Program

### *Description*

Under the California Streets and Highways Code Section 190, \$15 million is budgeted annually from the State Highway Account for grade separations statewide. The Section 190 Program provides funds to public agencies to grade-separate existing at-grade crossings, eliminate existing at-grade crossings, and improve existing grade-separated crossings.

Under Streets and Highways Code Section 2452, the California Public Utilities Commission is responsible for establishing and applying the criteria and formula used to prioritize projects nominated for grade separation or alternation. The criteria in the formula weigh vehicular and train volumes at crossing, project cost, accident history, delay caused by trains, sightlines along the crossing approaches, angle of the tracks to the roadway, and other factors.

As the process works, on a bi-annual basis, interested local agencies submit nominations to the CPUC with the data required for project evaluation. The Commission reviews the projects, holds public hearings, solicits testimony from applicants, and establishes a Grade Separation Priority List. After the Commission issues the Priority List, Caltrans accepts funding applications on or before April 1 of each fiscal year. While the priority list ranking is an important factor in whether a project is selected for funding, there are other factors that affect the decision. Projects must have completed design and environmental review, have a maintenance agreement with the host railroad, and have the local funding share committed. As a result, projects selected for funding may rank at the top of the priority list or at 50 or below.

A total of \$15 million is available annually from the Section 190 Program. This level of funding has remained unchanged for over 20 years, despite various legislative efforts to increase it. Theoretically, an allocation may be up to 80 percent of the estimated cost to eliminate an existing crossing or reconstruct an existing grade separation. For a grade separation of a proposed new crossing, an allocation can be 50 percent of the project cost, with 50 percent from the local agency. However, an allocation to a project may not exceed \$5 million from any one fiscal year. Cumulative allocations to any one project may not exceed \$20 million over a multi-year period, not to exceed five years. Further, an agency that has received an allocation greater than \$5 million is not eligible for an allocation for another project for a period of 10 years.

### *Project Categories*

Section 130 funds could be used for highway and rail projects.

## 4.0 LOCAL FUNDING SOURCES

Two local funding programs categories were considered as potential sources for projects listed in this report: Value Capture Mechanisms (impact fees, assessment districts, and tax increment financing) and generation of project revenue (joint development, utility easement and leases, and naming rights).

### Value Capture Mechanisms

#### *Description*

Value capture mechanisms provide the public sector the ability to capture some of the increased value - typically property value - that results from a transportation project. Without local government efforts to capture this value, the windfall accrues to private landowners. Examples include:

- A new freeway or interchange may increase the value of adjacent properties by improving access;
- Traffic calming investments on a local street may boost residential property values by reducing through traffic; and
- Implementation of a transit stations may create or improve the market for adjacent development.

The most common value capture mechanisms include: development impact fees; special assessment districts; and tax increment finance districts. Depending on the transportation project, the amounts recovered from these mechanisms may range from the partial payment of initial capital costs or partial operating cost payments to full repayment of capital costs and operating expenditures.

- **Development Impact Fees** are charges assessed by the public sector against developing property to recover the cost incurred to provide the transportation facilities required to serve the new or expanded development. The local government examines the proposed development, identifies what capital improvements are needed to sustain the desired level of service, and charges the developer a fee to cover a portion of the cost of the needed improvements. These fees are generally one-time cash payments. The developer of a proposed project pays the impact fee, which may in turn be passed on to the purchaser of the developed property.
- **Special Assessment Districts** are authorized in all 50 states either under explicit enabling legislation or under state constitutional provisions primarily to finance transportation facilities that provide local benefits. These districts cannot be used to finance facilities that provide general, community-wide benefits and as a result special assessments are not a viable alternative to finance major components of the regional transportation system.

However, many state legislatures have passed new enabling legislation that allows special assessment districts to finance a broader range of facilities than in the past. These districts often go by such names as improvement districts, road districts, metropolitan districts, and building authorities.

The greatest problem in using special assessment districts to finance regional transportation improvements is that it is difficult to establish a district that includes all those who benefit while excluding those who do not benefit. Special assessment districts are most successful in financing closed systems such as water and sewer systems.

- **Tax Increment Financing (TIF)** Tax increment financing (TIF) is a type of financing whereby municipalities can obtain in the present the fiscal benefit of future increases in the tax base by issuing bonds. TIFs are used primarily to fund redevelopment in blighted or underutilized areas. Under this method of financing, public improvements are financed by establishing an assessed value base in a project area at pre-project levels and dedicating the increment in property values for the repayment of bonds. The assessed valuation of property within the redevelopment area is determined as of a particular date, and is referred to as the frozen base assessed value. After the bonds are sold and redevelopment occurs, the assessed valuation in the project area generally rises, thus resulting in additional ad valorem revenues being generated within the project area. The difference in ad valorem

tax revenue received before and after the redevelopment is referred to as the tax increment. This revenue is paid into a special fund and used for repayment of tax allocation bonds, or bonds which are repaid through the dedication of tax increments. Only revenues above and beyond what would have been collected from the property owners under the base year assessed valuation are diverted into the repayment fund. When the bonds are fully repaid from the captured tax increments, the allocation to the special fund terminates, and the full value of the ad valorem taxes are disbursed to the involved taxing authorities.

#### ***Project Categories***

Value capture mechanisms can be used to contribute funding for the capital cost of most transportation modes.

#### **Generation of Project Revenues**

##### ***Description***

The most common mechanisms to generate project revenue are: joint development; utility easements and leases; and naming rights. Depending on the transportation project, the amounts recovered from these mechanisms typically provide partial support for on-going operating costs or partial repayment of capital costs.

- **Joint Development** is a process through which public transportation investments are coordinated with private land development investments so that they will generate a maximum stimulus to economic development and urban revitalization. Joint Development occurs when public and private sectors work cooperatively in the planning, financing, and construction of development projects adjacent to and integrated with transportation facilities.
- **Utility Easements and Leases** provide an opportunity for government entities to derive revenue from sharing use of the right-of-way with other non-interfering users. The types of uses generally interested and allowed to obtain easements or leases for use of transportation rights-of-way include utilities, fiber-optic networks and other forms of cable, communication systems, and other related uses.
- **Naming Rights** are a form of sponsorship provided through the provision of equity investments in the system. In return, sponsors receive a combination of advertising, promotion of image, and/or a commitment that their products will be used by the entity they are sponsoring. Sponsorships have become an increasingly important mechanism for funding large public projects, most notably stadiums, aquariums, and similar facilities that attract large attendance and/or provide high visibility.

#### ***Project Categories***

Generation of project revenue can be used to contribute funding for the capital cost of most transportation modes.

## 5.0 USER FEES

While used in many areas of the country, enabling legislation is required to authorize use of fees/tolls for individual projects within the State of California. The following sections summarize alternate forms of users fees including: multiple variations of tolling highways or bridges, the Pier Pass Program, container fees and gate fees.

### Tolls

#### *Description*

Tolls could provide a mechanism to generate revenue, moderate traffic demand, and/or provide incentive to use particular facilities. Tolling could be part of an overall funding strategy with toll revenues providing part of a larger revenue stream pledged for debt repayment. In addition to traditional tolling, the following sections summarize alternative forms of tolling that could be considered for future highway projects:

**Transportation Development Credits/Toll Credits:** Transportation Development Credits (TDCs), formerly known as toll credits, allow states which have toll road facilities that are part of the state and national highway system to utilize revenues derived from the facilities as a “credit” or “match” to any federally funded highway and/or transit related program. Toll credits are designed to 1) encourage states to increase capital investment in infrastructure; 2) increase the flexibility of state transportation finance programs; and 3) enable states to more effectively utilize existing resources.

The use of TDCs by a transportation agency does not generate new revenue for use on projects, rather they replace what otherwise would be local cash to meet federal matching requirements. By using toll credits to substitute for the required nonfederal share on a new Federal-aid project, the Federal share can effectively be increased to 100 percent.

Traditionally, the federal government would provide credits to states when only local and state funds were used to build toll facilities. However, SAFETEA-LU added a new provision that states are now given credit on a pro rata basis for their investments in toll projects.

**Shadow Tolls:** A Shadow Toll occurs on a roadway typically constructed under a Design Build Finance Operate (DBFO) arrangement where the government entity will pay the private contractor on an annual basis depending upon the volume of traffic using the road. The term “shadow tolling” is used since there are no tollbooths and the users do not pay tolls. Shadow tolls are not a financing source in themselves, but rather a payment approach which can employ a range of financing methods, innovative or traditional, and can permit a viable financing structure that fits the characteristics and needs of certain projects.

The potential benefits of shadow tolls to governments include:

- Transferring traffic risk to a developer/operator;
- Traffic levels are not impacted by users’ tolls or increased tolls;
- Multiple sources of revenues can be drawn upon to contribute to a shadow toll fund; and
- Project cost obligations can be reasonably known in advance and guaranteed for a particular traffic level.



Additionally, the traffic risk given to a developer/operator can be dampened by thresholds or guarantees. For example, if the traffic is less than specified in the agreement, a portion of the revenue shortfall could be made up by the Government. Conversely, if traffic is significantly greater than specified, a portion of the additional shadow toll revenues could be shared with the government sponsoring entity.

To date shadow tolls have only been implemented outside of the U.S., primarily in England. As a result there are no case studies within the U.S. to determine their effectiveness.

**Pass-Through Tolling:** Pass-through toll financing is a variation of the shadow tolling approach. Pass through tolling is an agreement between local communities and a state DOT where the local communities provide funding to build a state highway project and the state partially reimburses the community over time by paying a fee for each vehicle that drives on the new highway. In addition to supporting the construction of a project, the State DOT would also make repayment arrangements with communities that choose to maintain the new roadway facilities as well.

Pass-through toll financing can be used on toll or non-toll road facilities. However, this financing method is typically applied to non-toll roads. Pass-through agreements could be implemented with regional tollway authorities, counties, cities, and public or private entities.

Typically, the repayment schedule is based on traffic levels. If traffic levels are higher than projections in the agreement, the State DOT would repay at a faster rate. Conversely if traffic is lower than projected, repayment will occur over a longer period.

**Truck Toll (TOT) Lanes:** Truck only toll (TOT) lanes are highway lanes that are reserved for the use of commercial vehicles, primarily trucks. Commercial vehicles can pay a fee to use the lanes if so desired, or they can continue to use the general purpose lanes. TOT lanes can either be newly constructed facilities, or they can be created by reallocating the use of existing lanes. Similar in concept to HOT lanes, the pricing strategy for TOT lanes corresponds to a cost per mile that will keep the TOT lanes performing at a level of service that provides more reliable travel. The I-710 Corridor from Port of Long Beach/Los Angeles to SR-60 could potentially be a TOT facility.

Bonds leveraged from anticipated truck toll revenue could potentially be a component of the funding and financing proposed for the truck toll lane projects. However, since cost data and traffic forecasts are only conceptual at this time, the toll revenue and bonding potential described below should only be considered as order of magnitude estimates. The following assumptions were used to generate order of magnitude toll revenue bond estimates for each of the truck lane projects:

- Truck toll project opens in the Year 2030, the revenue begins Year 2030, and construction is completed in the Year 2030.
- First year total truck toll revenue estimates:
  - \$255M year
  - \$308M year
  - \$435.5M
- The range of annual operating and maintenance (O&M) cost were assumed to be between \$6.2 million and \$13.6 million.
- Revenue and O&M costs will increase 110% over 30 years

- A debt coverage rate of 1.4 was assumed for all projects.
- Bonds would be issued at an interest rate of 5.75 percent with a 30 year repayment schedule and one scenario with a 40 year repayment schedule.
- No transaction fees, debt service costs, or debt service reserves have been included at this time, but would be included in future financial strategy development.
- As a rough estimate, the level of bond proceeds that could be issued under the truck toll projects was estimated to be roughly equal to 14 times the net revenue available for payment of debt service, assuming a 1.4 coverage ratio.
- In the absence of a real cost or schedule, the analysis was done in constant dollars. Any future financial strategy development would be based on refined project cost estimates and a proposed project implementation schedule and would be based on year of expenditure dollars.

As shown on the table below, based on the 2030 annual toll revenue estimates, bonds could issued to cover on the order of 20 percent of the truck toll projects cost.

**Table 3**  
**Order of Magnitude Truck Toll Revenue Bond Levels**

2030 Toll Revenue (2007\$, Millions)	Bond Term	Estimated Toll Revenue for Mid-Point of Bonding Period (2007 \$, Millions)	Average Available for Debt Service Payment (2007 \$, Millions)*		Bonding Capacity (in Millions)	
			Low Maintenance Cost	High Maintenance Cost	Low Maintenance Cost	High Maintenance Cost
\$255	30 years	\$369	\$259	\$254	\$3,670	\$3,595
\$308	30 years	\$446	\$314	\$309	\$4,446	\$4,371
\$436	30 years	\$631	\$446	\$441	\$6,312	\$6,237
\$255	40 years	\$418	\$294	\$289	\$4,161	\$4,086

## PierPass Program

### Description

PierPass is a not-for-profit organization created by marine terminal operators to reduce congestion and improve air quality in and around the Ports of Los Angeles and Long Beach. PierPass created the OffPeak program to provide an incentive for cargo owners to move cargo at night and on weekends. For marine containers moving through the Ports of Long Beach and Los Angeles during peak periods, there is a \$50 per TEU (\$100 per FEU) fee. The fee is intended to provide an incentive for cargo owners to move shipments at night and on weekends, when there is no fee. The goal of the program is to reduce port-related truck traffic congestion on local freeways, curb port congestion and eliminate pollution caused by idling trucks during peak daytime traffic hours.

According to the PierPass website, during the first six months of operation, between 30 and 35 percent of all gate activity went to OffPeak operations. Prior to the program's implementation, PierPass officials had estimated that OffPeak would divert 15 to 20 percent of daytime movements to nights and weekends by the end of the first year.

#### ***Project Categories***

Working in cooperation with the marine terminal operators, the potential exists to expand the use of funds for the PierPass provide for specific highway and port improvement projects.

#### **Container Fees**

##### ***Description***

On February 23, 2007, State Senator Alan Lowenthal introduced a bill would require the Ports of Los Angeles and Long Beach, as well as the Port of Oakland, to collect a user fee on the owner of container cargo moving through the Ports. The fee would be set at a rate of \$30 per twenty-foot equivalent unit (TEU) and would require the Ports of Los Angeles and Long Beach to:

- Transmit half of the funds from fee to the Southern California Port Congestion Relief Trust Fund, which the bill would establish in the State Treasury; and
- Transmit the other half of funds to the Southern California Port Mitigation Relief Trust Fund, which the bill would establish in the State Treasury.
- Senator Lowenthal's bill would require the moneys transmitted to each trust fund be available, upon appropriation, for expenditure by:
  - the CTC exclusively for the purposes of funding projects that improve the flow and efficiency of container cargo to and from the ports, and to fund the administrative costs of this program; and
  - the State Air Source Resources Board to develop a list of projects to mitigate environmental pollution caused by the movement of cargo to and from those ports, and for the administration of this program.

The bill would prohibit moneys deposited in those funds from being loaned or transferred to, or allocated or appropriated in any other way to, the General Fund.

A similar bill was vetoed last year by Governor Arnold Schwarzenegger. At that time, the governor urged industry leaders to come up with an alternative funding plan.

Finally, a similar bill introduced in the Washington State Legislature in February; however this bill has run into heavy opposition not only from retailers, but also from port authorities and labor groups worried about losing volume to Canadian ports.

Based on analysis conducted as part of this study, there is little support for the implementation of container fees to establish a trust fund for transportation and air quality improvement projects. However, establishment of a fee program similar to what was implemented for the Alameda Corridor may be supported by both the ports and private industry. Under the Alameda corridor approach, container fees implemented to address specific projects. Under this pay as you go approach, when the project is completed the fee ends.

Another approach with container fees could be to issue revenue bonds. Table 5 provides three order of magnitude bond issuance levels based on the following assumptions:

- Three projected forty-foot equivalent units (FEU) scenarios for 2030: Low (12.25 million); Medium (16.65 million), and High (21.25 million)
- Seven levels of container fees ranging from \$10 to \$200.

- A debt coverage rate of 1.4 was assumed for all projects.
- Bonds would be issued at an interest rate of 5.75 percent with a 30 year repayment schedule.
- No transaction fees, debt service costs, or debt service reserves have been included at this time, but would be included in future financial strategy development.
- As a rough estimate, the level of bond proceeds that could be issued under the truck toll projects was estimated to be roughly equal to 14 times the net revenue available for payment of debt service, assuming a 1.4 coverage ratio.
- In the absence of a real cost or schedule, the analysis was done in constant dollars. Any future financial strategy development would be based on refined project cost estimates and a proposed project implementation schedule and would be based on year of expenditure dollars.

**Table 4**  
**Potential Bonding Capacity From Container Fees**  
**(\$, 000)**

Scenario	2030 Projected FEUs (000)	\$10	\$20	\$30	\$40	\$50	\$100	\$200
Low	12,250	\$1,238	\$2,476	\$3,714	\$4,953	\$6,169	\$12,338	\$24,675
Medium	16,650	\$1,683	\$3,366	\$5,049	\$6,731	\$8,384	\$16,769	\$33,538
High	21,250	\$2,148	\$4,296	\$6,443	\$8,591	\$10,701	\$21,402	\$42,804

A second bonding scenario analysis examined the potential of implementing an alternative technology system that would connect the San Pedro Bay ports and an inland staging yard. It was assumed this the alternative technology system would accommodate approximately 1,215,000 FEUs per year (equivalent to the existing Hobart yard). As shown below, under this scenario revenue bonds in the range of \$122 million and \$2.45 billion could potentially be issued:

- \$10 container fee: \$122.8 million bond issue
- \$20 container fee: \$245.8 million bond issue
- \$30 container fee: \$368.4 million bond issue
- \$40 container fee: \$491.2 million bond issue
- \$50 container fee: \$611.8 million bond issue
- \$100 container fee: \$1,223.7 billion bond issue
- \$200 container fee: \$2,447.4 billion bond issue

### ***Project Categories***

If an agreement can be found among the ports and the private sector, container fees could provide a funding source for highway, port and rail projects.

### Gate Fees

#### *Description*

At present, significant portions of the \$2 billion Clean Air Action Plan remain under-funded. Along with the Southern California Air Quality Management District's \$36 million commitment, the Ports of Long Beach and Los Angeles have committed \$166 million and are researching a variety of mechanisms to achieve the Clean Air Action Plan goals including private industry fees and state General Obligation bonds. One mechanism being considered in the implementation of impact fees associated with the movement of cargo or sources (i.e., trucks, locomotives, vessels, etc.) as an approach to accelerate emission reductions from all source categories.

As stated in the *Clean Air Action Plan*, for impact fees to achieve the desired results, they must be structured appropriately. The following principles were included in the *Clean Air Action Plan* to provide guidance when crafting any fee with the goal of reducing pollution.

- 1) The fee should target the source of pollution, not cargo in general, and the fee must be higher for those individual sources that cause the greatest impact, while bypassing those sources that meet clearly defined goals/standards. For instance, a truck that does not meet the goals of the Clean Air Action Plan could be assessed a fee based on how old and/or dirty that truck was; while a clean truck meeting the goals could assessed no fee or a small administrative fee necessary to cover the costs of monitoring compliance.
- 2) Fees collected should be used to clean up the source that generated the fee (i.e., fees assessed against a dirty truck should fund a retrofit or replacement truck).
- 3) Costs should ultimately be borne by those who benefit from goods movement. To the extent possible, fees should be shifted to the beneficial cargo owners (BCO). Programs similar to the successful PierPass program provide an example of how this can be done.
- 4) When a specific program achieves its goal, the fee must end. Broad-based fees that have no defined use may fail to garner sufficient support to be successful. In addition, they undermine the goals of the program by not rewarding those who achieve the goals.

According to the *Clean Air Action Plan*, these principal will provide success in two ways. First, the resulting program would generate the funding necessary to achieve the emission reduction goals. Second, they hold the BCO accountable for their shipping decisions, making them pay the price for dirty modes of shipping and financially encouraging them to make more environmentally sound shipping decisions. While these principles are not absolute, adherence to them will more likely result in reduced emissions and increase the chances of broad-based support.

#### *Project Categories*

If implemented, impact fees could provide a funding source for highway, port and rail projects.

## 6.0 INNOVATIVE FINANCE

Around the country, as competition for federal, state, and local funding has becomes more competitive, the use of innovative finance techniques has increased. This section provides an overview of innovative financing techniques that are or have been used by other transportation agencies. In general, innovative

finance encompasses a mixture of: financing mechanisms; management techniques; and project delivery approaches to supplement traditional sources and methods.

The traditional approach to funding transportation projects has been through a combination of the Federal, State, regional and local sources described above. This funding approach typically leads to projects being incrementally implemented as funds become available over a number of years. The primary benefits of this “pay-as-you-go” approach to project funding are the simplicity of funds management and the lack of debt financing. However, there are negative implications with this approach as well including the potential for delays in implementing projects as a result funds not being available. These project delays could also contributed to additional negative implications related to the impact of inflation on project costs, and deferral of congestion, safety, air quality, and economic development benefits.

Innovative finance has evolved as a mechanism for transportation agencies to build projects faster by providing an alternative and/or a supplement to the traditional grant-based funding approach. As stated by the FHWA in its *Innovative Finance Primer*, the primary objectives of innovative finance are to:

- Maximize the ability of states and other project sponsors to leverage Federal capital for needed investment in the transportation system;
- More effectively utilize existing funds;
- Move projects into construction more quickly than under traditional financing mechanisms; and
- Make possible major transportation investments that might not otherwise receive financing.

As described in more detail below, innovative finance techniques typically fall into three main categories:

Innovative Financing Mechanisms consist of short and long term credit assistance and debt finance instruments. Included in this category are Federal and state credit assistance, general obligation bonds, revenue bonds, grant anticipation notes (GANs), certificates of participation (COPs), and private activity bonds.

Innovation and Management of Revenue Sources consist of approaches to manage the use of federal funds.

Innovative Project Delivery and Management Systems/ Public Private Partnerships consist of alternative forms of contracting beyond traditional design-bid-build through the use of public-private partnerships and/or leveraging of a project asset.

## 6.1 Innovative Financing Mechanisms

The sections below describe four types of long-term and short-term bonding and debt instruments. These include General Obligation (GO) Bonds, Revenue Bonds, Certificates of Participation (COPs), and Private Activity Bonds.

### General Obligation Bonds

#### *Description*

General obligation bonds (GO bonds) are bonds that are legally backed by the full faith and credit of the issuing government. GO bonds are considered the most secure type of revenue bond, and therefore have

the lowest interest rates. The security is based on the issuing government's ability to use its full taxing power, if necessary, to assure repayment.

The primary advantages of GO bonds are the following:

- Ability to sell at lowest rates of interest due to their low risk;
- Lower administrative costs in preparing for bond issuance;
- Passage of a bond referendum by the voters can confirm the extent of population support for the project or program being financed.

Offsetting these advantages are the following disadvantages:

- Potential for delay due to need for voter referendum;
- In the absence of voter approval, agency officials must identify alternative ways to finance the project or else cancel it outright;
- Legal debt limits limit the magnitude of the debt issues; and
- With debt repayment from general tax revenues, the taxpayers paying for the project may be the same as the taxpayers benefiting from the project.

#### ***Project Categories***

GO bonds can be used on all public sector transportation projects.

#### **Revenue Bonds**

Revenue bonds are municipal bonds distinguished from other bonds by the guarantee of repayment exclusively from revenues generated by a project. Unlike GO bonds which encumber tax revenue and the general credit of the issuing entity, only the project specific revenues specified in the legal contract between the bond holder and bond issuer are required to be used for repayment the Revenue Bonds. Interest rates may be slightly higher for revenue bonds since the security pledge is not as strong as GO Bonds. As a result, Revenue Bonds generally require establishment of a debt service reserve fund.

#### ***Policy Considerations***

Compared with other forms of bonding, Revenue Bonds are considered the second-most secure type of municipal bonds. In general, any government agency generating operating revenues and expenses can issue revenue bonds.

#### ***Project Categories***

Revenue bonds can be used on transportation revenue-generating projects including toll roads and bridges; airports; and ports.

#### **Certificates of Participation (COPs)**

##### ***Description***

COPs are tax-exempt bonds, issued by a state-authorized, tax-exempt entity (typically called Finance Corporation) that allows government entities to finance capital projects. The proceeds of the bond sale are

used to acquire capital assets. The capital assets are leased to a government entity, which makes semi-annual lease payments using a combination of local funds and Federal grant funds. Additionally, COPs can provide government entities a long-term debt instrument that does not require voter approval or fall under other state constitutional and statutory requirements. Across the country, COPs have been used by municipalities to pay for prisons, office buildings, vehicles (including transit vehicles), and even parks.

The primary transportation use of COPs has been for transit investments since transit agencies are reliant on capital equipment (rolling stock, buses, or depots) that is well suited to lease agreements. COPs have not been used regularly for roadway projects, but they provide a potential creative financing option for specific highway related investments, such as automated toll collection or ITS equipment.

Examples of COPs financing include the California Transit Finance Corporation, which has funded bus purchases for several California transit agencies. Transit agencies in Los Angeles, New York, and Denver have also issued locally-funded Equipment Trust Certificates, COPs, and Beneficial Interest Certificates to finance bus purchases. These securities are very similar and differ primarily in the specifics of their implementation and documentation.

Benefits of COP's to transit agencies include:

- Freeing up of Federal grants that had been committed to vehicle purchase. This allows the agency to reprogram the grant funds for other capital projects and accelerate their completion;
- Potentially lower vehicle unit costs from a larger order size;
- Reduction in the risk of higher future vehicle prices due to inflation or changes in environmental or other laws;
- Potential lower operating costs from accelerated retirement of older vehicles and maintaining a more standardized fleet;
- Better conformance with mandates for air quality, or service to persons with disabilities; and
- Net cost savings from interest earned on cash balances.

### ***Project Categories***

COPs have been used primarily for transit projects but could be used for highways, airports, or ports.

### **Private Activity Bonds**

#### ***Description***

Private Activity Bonds are bonds that allow a portion of the proceeds to be used for non-governmental purposes. By definition, a Private Activity Bond is either:

- A bond of which more than 10 percent of the proceeds will be used for non-governmental purposes and which is going to be repaid from revenues received from a private entity; or
- A bond that will have the lesser of 5 percent or \$5 million of the proceeds used for loans to non-governmental entities.

As part of SAFETEA-LU, Section 142 of the Internal Revenue Code was amended to add highway and freight transfer facilities to the types of privately developed and operated projects for which private activity



bonds may be issued. This change allows private activity on these types of projects, while maintaining the tax-exempt status of the bonds. However, the law sets a \$15 billion limit on the total amount of these bonds and directs the Secretary of Transportation to allocate this amount among qualified facilities. The U.S. DOT is presently accepting applications from sponsors interested in using a portion of the \$15 billion in exempt facility bonds.

The types of highway and freight transfer facility projects that would qualify for this revenue source include:

- Any surface transportation project which receives Federal assistance under Title 23;
- Any project for an international bridge or tunnel for which an international entity authorized under Federal or State law is responsible and which receives Federal assistance under Title 23; and
- Any facility for the transfer of freight from truck to rail or rail to truck which receives Federal assistance under Title 23 or Title 49.

Finally, to provide additional incentives for private equity investment, SAFETEA-LU also states that any surface transportation project which receives Title 23 assistance is qualified to benefit from private activity bonds. This includes projects that receive TIFIA credit assistance since these are Title 23 projects. As a result, this provision extends eligibility to TIFIA-assisted public transportation, intercity bus or rail facilities and vehicles, including vehicles and facilities owned by Amtrak, public freight rail facilities or private facilities providing public benefit for highway users, and intermodal freight transfer facilities.

Private Activity Bonds represent a dual interest by allowing private benefit in order to stimulate investment in infrastructure that will provide a public benefit. To increase private developer and operator investment in U.S. transportation infrastructure, SAFETEA-LU included provisions to facilitate private access to tax-exempt interest rates. The goals of these provisions are to lower the cost of capital, enhance private investment, and attract new sources of revenue through the increased involvement of private investors.

### ***Project Categories***

Private Activity Bonds are primarily designed for use on highway and freight transfer facility projects.

## **6.2 Innovation and Management of Federal Funds**

Federal transportation law provides various mechanisms that facilitate better cash management and enhance opportunities to leverage future federal funds. These mechanisms include Tapered Match, Flexible (or Soft) Match, and Advanced Construction Authority.

### **Tapered Match**

#### ***Description***

Historically, local match for Federal grants on individual transportation projects was on a payment-by-payment basis. Under this approach, project sponsors had to shoulder the required non-Federal matching

share of project costs each and every time they sought reimbursement of eligible project costs. This requirement not only ensured that the state would pay the required non-Federal share over the life of a project's construction, but also that the state would do so at every step of the way to completion.

A legislative change as a result of TEA-21 removed the requirement for a payment-by-payment match. The removal of this requirement created the opportunity for project sponsors to use the tapered match approach, which imposed the non-Federal matching ratio on the project total rather than individual payments.

The tapered match approach allows project sponsors to seek Federal reimbursement of expenditures as high as 100 percent in the early phases of a project provided that by the time the project is complete, the overall Federal contribution does not exceed the statutory Federal-aid limit for the project.

Most Title 23 projects may request the use of a tapered match approach, with the following exceptions which are considered to be inconsistent with the intent of tapered match:

- Advance construction projects;
- STP projects for which the non-Federal match is being provided on a program-wide basis, or
- Projects that are financed with GARVEE bonds.

Tapered match is most useful in cases where the government sponsor of a Federal-aid project lacks sufficient funds to match Federal grants at the start of the project, but expects to accumulate the match over the life of the project.

When requesting approval to use the tapered match approach, project sponsors must document the approach will achieve one of the following:

- The use of tapered match, when compared to the use of traditional match procedures, would result in an earlier project completion.
- The project costs would be reduced by using a tapered match
- Tapered match would provide for additional non-Federal funds to be leveraged for the project.

### ***Project Categories***

The tapered match approach can be used on all transportation projects.

### **Flexible (or Soft) Match**

#### ***Description***

Traditionally, Federal-Aid programs required that recipients of Federal funds contribute to the total cost of a project. Additionally, Federal law placed limits on both the types and sources of contributions that could satisfy the matching requirement. For instance, cash contributed by state and local governments could satisfy the matching requirement while other types and sources of funding simply reduced the total project cost and the standard matching requirement continued to be applied to the remaining project cost.

Provisions in the NHS Act and TEA-21 introduced flexibility by allowing certain public donations of cash, materials, and services to satisfy the non-Federal matching requirement. These matching options included:

- The value of private and certain state and local contributions, including publicly-owned property;
- Funds from other Federal agencies may count toward the non-Federal share of recreational trails and transportation enhancement projects;

## MULTI-COUNTY GOODS MOVEMENT ACTION PLAN

### APPENDIX A - FINANCIAL FRAMEWORK

- Funds from the Federal Lands Highway Program may be applied as non-Federal match for projects within or providing access to Federal or Indian lands; and
- Funds from Federal land management agencies may be used as the match for most Federal-aid highway projects.

These legislative changes, known collectively as Flexible Match provisions, increased a project sponsor's ability to fund its project by:

- Accelerating certain projects that receive donated resources;
- Allowing the reallocation of funds that otherwise would have been used to meet Federal-aid matching requirements; and
- Promoting public-private partnerships by providing incentives to seek private donations.

Most of the conditions related to the use of flexible match concern the types of contributions that are eligible. The critical part of this eligibility determination is the combination of the source of the contribution (private, local, state, or Federal) and the nature of the contribution (cash, materials, land, services, or buildings and equipment).

Table 5 provides the basic tests that determine whether a given non-Federal contribution can satisfy Federal-aid matching requirements under the flexible match provisions.

**Table 5**  
**Requirements for Flexible Match Contributions**

Type of Donation	Source of Donation	Conditions
Funds	Private - Yes	Funds must be received during the period between project approval and submittal of final voucher
Funds	State - Yes	Same as above
Funds	Local Govt. - Yes	Same as above
Land (right-of-way)	Private - Yes	Property must be appraised to determine fair market value
		Value must be included in total project cost
		Property may be donated anytime during the project development
		Donation does not influence environmental assessment
Land (right-of-way)	State - Yes	Same as above
Land (right-of-way)	Local Govt. - Yes	Same as above
Materials	Private - Yes	Materials must be appraised to determine fair market value
Materials	State - No	
Materials	Local Govt. - Yes	Materials must be appraised to determine fair market value
Services	Private - Yes	Grantee must document the market value of services
Services	State - Limited	Publicly-contributed services count toward match for only Transportation Enhancement projects
Services	Local Govt. – Limited	Publicly-contributed services count toward match for only Transportation Enhancement projects

Source: <http://www.fhwa.dot.gov/innovativefinance/ifp/innoman.htm>, March 2007.

#### ***Project Categories***

The tapered match approach can be used on all transportation projects.

### Advanced Construction Authority

#### *Description*

Advanced Construction Authority provides a project sponsor the ability to request and receive approval to construct Federal-aid projects in advance of the apportionment the federal dollars. This technique gives project sponsors a cash flow management tool which allows for the accelerated start of projects using their own funds with a future conversion to Federal assistance. Typically, project sponsors "convert" advance-constructed projects to Federal aid when sufficient Federal funds and obligation authority are available, and do so all at once.

Project sponsors also have the option of a partial conversion of advanced construction where they obligate funds for an advance-constructed project in stages. This removes any requirement to wait until the full amount of obligational authority is available. Project sponsors can convert an advance constructed project to a Federal-aid project in stages, based on cash flow requirements and availability of obligational authority, rather than all at once on a single future date. This flexibility enables a project sponsor to begin some projects earlier which will then be delivered to the public sooner.

The use of Advanced Construction Authority minimizes the need to set aside full obligational authority before starting projects. As a result, implementing agencies can accomplish a greater number of concurrent projects that would otherwise not be possible. In addition, Advanced Construction Authority can facilitate construction of large projects, while maintaining obligational authority for smaller projects.

#### *Project Categories*

Advanced construction authority can be used on all transportation projects.

### 6.3 Innovative Project Delivery and Management Systems/Public Private Partnerships

Innovative project delivery and management systems represent a partnership between a public agency and private sector entity, which expands on the traditional, private sector role in the delivery of transportation projects, also known as Public Private Partnerships (PPP).

According to FHWA's website, public-private partnerships (PPPs) refer to contractual agreements formed between a public agency and private sector entity that allow for greater private sector participation in the delivery of transportation projects.

By expanding the private sector's role on projects, public agencies are able to tap private sector's technical, management and financial resources in new ways to achieve objectives such as greater cost and schedule certainty, supplementing in-house staff, innovative technology applications, specialized expertise or access to private capital.

Conversely, business opportunities for the private partner can expand in return for assuming the new or expanded risks and responsibilities.

Key reasons public agencies have established PPPs include:

- Accelerating the implementation of high priority projects by packaging and procuring services in new ways;

- Turning to the private sector to provide specialized management capacity for large and complex programs;
- Enabling the delivery of new technology developed by private entities;
- Drawing on private sector expertise in accessing and organizing the widest range of private sector financial resources;
- Encouraging private entrepreneurial development, ownership, and operation of highways and/or related assets; and
- Allowing for the reduction in the size of the public agency and the substitution of private sector resources and personnel.

The following sections discuss options that expand private sector responsibilities through the use of partnerships. Table 6 summarizes the variation in roles and responsibilities between the contracting approaches.

**Table 6**  
**Innovative Contracting Roles and Responsibilities**

	Own	Conceive	Design	Build	O&M	Financial Responsibility
Design-Build	Public	Public	Private by Fee Contract		Public	Public
Design-Build-Operate	Public	Public	Private by Fee Contract			Public
Design-Build-Finance	Public	Public or Private	Private by Fee Contract			Public, Public/Private, or Private

Source: <http://www.fhwa.dot.gov/ppp.htm>, and Sharon Greene & Associates, November 2006.

## Design-Build Project Delivery

### *Description*

Design-Build is a project delivery method that combines two traditionally separate services into a single contract. With Design-Build procurements, project sponsors execute a single fixed-fee contract for both architectural/engineering services and construction. Historically, the design-build project delivery method has been more prevalent in private sector work, however it is becoming increasingly popular in the public sector.

With Design-Build, the private contractor assumes primary responsibility for the design work and all construction activities. Additionally, the contractor assumes the risks associated with providing these services for a fixed fee. The project sponsor is typically responsible for project financing and operating and maintenance when construction is completed.

Under the Design-Build approach, a certain amount of preliminary engineering and project definition must be completed by the project sponsor in order to prepare bid documents. Experience in the highway sector suggests that preliminary design efforts of 10 to 15 percent completion are usually adequate. While a greater level of design may be advantageous from the perspective of greater accuracy in cost estimation, it may serve to minimize opportunities for private sector innovation.

The typical design-build procurement practice is to rely upon best value, which is also encouraged by Federal guidelines. The best value approach takes into account both the technical capabilities and qualifications of the design-build team, and cost. There is no universally accepted approach for determining

best value, with the request for proposal usually specifying the relationship between technical factors and price.

#### ***Project Categories***

All transportation modes can use Design-Build

### **Design-Build-Operate–Maintain Project Delivery**

#### ***Description***

The Design-Build-Operate-Maintain (DBOM) model (also known as build-operate-transfer (BOT)) adds operations and maintenance (O&M) to the design and construction responsibilities of design-build procurements. This “turn-key” delivery approach transfers design, construction, and operation of a single facility or group of assets to a private sector partner and is practiced by several governments around the world.

With DBOM, the contractor assumes primary responsibility for the design work, all construction activities, and on-going O&M for the transportation project. Additionally, together with the design-builder assumes the risks associated with providing these services for a fixed fee. The project sponsor is typically responsible for project financing and retains the operating revenue risk as well as any surplus operating revenue.

The advantage of the DBOM approach include:

- Combining responsibility for usually disparate functions—design, construction, and maintenance—under a single entity which allows the private partners to take advantage of a number of efficiencies;
- Requires the establishment of a long-term maintenance program up front, together with estimates of the associated costs; and
- Provides the benefits of "life cycle costing" as part of the process since contractors understand that most infrastructure owners spend more money maintaining their systems than on expansion.

DBOM contracts are typically awarded through a competitive bid process following a transparent tender process. In response to the specifications provided in the tender documents, bidders provide a single price for the design, construction and maintenance of the facility for whatever period of time is specified.

#### ***Policy Considerations***

While the DBOM approach has the potential to reap substantial rewards, project sponsors must be able to specify all standards to which they want their facilities designed, constructed, and maintained. Project sponsors relinquish much of the control they typically possess with traditional project delivery.

#### ***Project Categories***

All transportation modes can use Design-Build-Operate-Maintain

### Design-Build-Finance Project Delivery

#### *Description*

The Design-Build-Finance-Operate (DBFO) approach transfers to the private sector the responsibilities for a project's design, construction, finance and O&M bundled together. Within the US, there is a great deal of variety in DBFO arrangements especially related to the degree to which financial responsibilities are actually transferred to the private sector. However, one common component of all DBFO projects is that they are either partly or wholly financed by debt leveraging revenue streams dedicated to the project. These revenue streams are primarily direct user fees (tolls), however, others sources include lease payments, shadow tolls, and vehicle registration fees. Future revenues are leveraged to issue bonds or other debt that provide funds for capital and project development costs. Additionally, they are also often supplemented by public sector grants in the form of money or contributions in kind, such as right-of-way. In certain cases, private partners may be required to make equity investments as well.

The DBFO approach is more commonly used to develop new toll road projects in Europe, Latin America, and Asia. In these areas the project's debt is usually raised by private concession companies who are fully responsible for designing, building, financing, and operating the projects. However, in the US, given public sector agencies' ability to issue low-interest tax-free debt, it is often more cost-effective for public project sponsors to issue debt than their private sector partners. Because of this, public project sponsors using the DBFO approach in the US often issue project debt themselves, but rely on their private partners to study the different options for doing so and to recommend a final financing package. In such cases, the revenue risk may be passed on to the private partner or retained by the public project sponsor.

#### *Policy Considerations*

DBFO procurements can be expected to shift a great deal of the responsibility for developing and operating surface transportation infrastructure to private sector partners. In nearly all cases, the public agency sponsoring a project would retain full ownership over the project. However, as with the DBOM approach, the private partner would have design-build responsibilities and would then maintain and operate the infrastructure for a fixed fee. Depending on the revenue sources used and revenue risk allocation, private partners in the United States may or may not be exposed to revenue risks.

#### *Project Categories*

All transportation modes can use Design-Build-Finance-Operate.

### Leasing of Publicly-Owned Assets

#### *Description*

This PPP approach involves the long term leasing of an existing, publicly-financed toll facility to a private sector concessionaire. The lease would be for a prescribed period during which the concessionaire would have the right to collect tolls. In exchange for the lease, the private partner must operate and maintain the facility, in some cases make improvements, and pay an upfront concession fee. The potential benefits of long term leases include:

- De-politicizing the toll setting process by transferring responsibility to the private sector;
- Ability of leases to increase toll revenues generated by existing facilities;

- Ability to generate extremely large up-front lease payments that can be used to fund other needed transportation improvements;
- Ability to reduce on going public sector operating, maintenance and capital improvement costs; and
- Potential to capture private sector operational and maintenance efficiencies.

Long term leases are procured on a competitive basis, with awards going to the qualified bidder making the most attractive offer to the sponsoring agency. Typically, the most important criterion is the concession fee amount. Other criteria related may include the length of the concession period, the bidder's credit worthiness and the bidder's professional qualifications.

#### Recent Experience

Within the US, three major long term lease transactions have recently closed:

- The 99-year lease of the 7.8 mile Chicago Skyway for a fee of \$1.8 billion in January 2005;
- The 99-year lease of the 8.8 mile Pocahontas Parkway in Richmond, Virginia for \$548 million,
- The 75-year lease of the 167 mile Indiana Toll Road for \$3.85 billion in July 2006.

#### Factors Affecting the Use of Long Term Leases

For both the public and private sectors, there are a number of factors that influence the use of long term leasing arrangements.

- The public sector's most basic factors are the political and financial situation of individual states and local jurisdictions. When these two factors coincide, local leaders may make the decision to consider leasing arrangements. However, in cases where there is not a pressing financial need, local decision makers may explore the possibility of leasing toll road assets to determine if the terms of a potential transaction would be attractive enough to move forward with an actual transaction.
- The private sector's primary motivation for pursuing leasing opportunities is the potential to gain an adequate rate of return on their investment.

Additionally, Moody's Investors Service has identified the following key characteristics that may make certain toll facilities good candidates for lease arrangements:

- Established toll roads that have political limits on toll raising ability;
- Government owned roads that are short of capital to fund improvement programs;
- Roads with a significant number of non-resident users, such as truckers or tourists, who may be less able to effectively protest against privatization; and
- Roads that are financially distressed but which may present a strategic business opportunity for concessionaires seeking to enter the U.S. market.

#### Role of Overseas Investors in the U.S. Leasing Market

To date all private long term lease investors active in the U.S. market are overseas investors. In contrast the PPP markets in Europe and Australia are more mature than those in the U.S. and experienced investors from both continents are actively seeking out new investment opportunities in this country. Enhancing this trend has been the weakened U.S. dollar together with the perception that toll road investments in the U.S. are less risky than those in developing countries. Additionally, due to the strong tax incentives that compel the U.S. capital markets to prefer municipal debt, the market for private activity debt is far greater outside the U.S.



As a result of the overseas investors' interest in the emerging U.S. market for toll road, PPPs are generating interest among U.S. banks and investment funds. A number of U.S. financial institutions are now in the process of establishing infrastructure investment funds. Additionally, SAFETEA-LU's provision to issue tax exempt private activity bonds for transportation projects should encourage U.S. investors to expand their activity in the domestic toll road market.

#### The Pros and Cons of Long Term Leases

Even with the significant upfront fees paid to the Chicago Skyway and Indiana Toll, the merits of long term leasing are still uncertain. Currently, potential long-term leases of toll roads and bridges are being considered in New York, New Jersey, Delaware, Pennsylvania and Illinois. As a result, the potential lease of some of the nation's most valuable toll road assets has generated a great deal of discussion, including hearings on the subject conducted by the U.S. House of Representatives Transportation Committee in May 2005.

Two examples of toll road owners that have decided not to pursue long term leases are the Harris County Toll Road Authority (HCRTA) and the Metropolitan Washington Airport Authority (MWAA).

- The HCRTA studied the feasibility of leasing its 82 mile toll road network in Houston and found that a 75-year lease of these facilities could attract as much as a \$7 billion fee. However, Harris County commissioners unanimously rejected a possible lease in July 2006. The commissioner's preferred maintaining public control over the toll road network and to use the revenues generated to help fund other transportation needs.
- The MWAA, recently ended attempts to lease the Dulles Toll Road. Rather than seeing toll revenues leave the corridor, MWAA submitted a counter proposal to the Governor of Virginia to assume the operation of the toll road outright. MWAA's proposal calls for the increase in toll rates similar to the proposals of the private sector bidders, but the MWAA would invest all the proceeds in rail and roadway improvements within the corridor.

#### ***Policy Considerations***

The primary issue for policy makers is whether ceding control of toll road income and assets for extremely long periods of time is in the public's best interest. Unfortunately, the easy answers to several basic questions will not be realized until the lease arrangements end some 70 to 90 years in the future. Did the private sector partners derive reasonable profits or were they excessive? Were the transactions associated with legal battles? Were local residents overburdened by toll increases? Were there alternative ways that the public sector could have extracted comparable revenues from their toll road assets?

Policy issues that would need to be assessed before entering into a long term lease arrangement include:

- The potential undervaluation of an asset to be leased. Competition can help prevent undervaluation. The Chicago Skyway procurement provides an example where the value of the winning proposal was 2.6 times greater than the next highest bid. Those agencies considering leasing options should seek the advice of financial advisors in order to better identify fair market values of lease transactions based on the anticipated revenue streams.
- The legal terms and conditions underpinning lease transactions to ensure a fair outcome and protect the public. For example, the terms and conditions can include language to preserve some public control over toll rates; set of caps on the private sector's rate of return; and ensure that the lease proceeds are used to support transportation improvements in prescribed areas. Additionally, governments provide oversight of the private sector partner's performance as well as include capital reinvestment, availability, safety, and customer services requirements in their lease agreements.

***Project Categories***

Currently, only highways may be developed under long-term lease arrangements.

## **7.0 CONCLUSION**

As stated previously, based on a review of existing funding plans for the 249 goods movement projects identified in this study, a shortfall in the range of \$37 billion currently exists. Due the scarcity and competition for funding, as individual projects or packages of projects move forward it will be important for project sponsors to evaluate the strengths and weaknesses of a variety of funding sources identified in the previous sections. This will allow sponsors to target their efforts on the federal, state, regional, local, and user fee funding sources and innovative financing mechanisms that will have the highest probability of success.